EDUCATION MASTER PLAN
for
BROWARD COMMUNITY COLLEGE

prepared by

Voorhees Group LLC

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CONTEXT FOR EDUCATION MASTER PLANNING

The second largest community college in Florida and among the largest in the United States, Broward Community College (BCC) is a multi-campus college district comprising three large campuses and three educational centers. Two centers are now in the planning stage. Broward Community College's service area covers the entire area of Broward County. The three campuses include the A. Hugh Adams (Central) Campus of Broward Community College in Davie, the Judson A. Samuels (South) Campus in Pembroke Pines, and the North Campus located in Coconut Creek. The two centers are the Willis Holcombe Center located in downtown Fort Lauderdale (which also houses the District Offices) and the Pines Center located in the southwestern part of Broward County. Two new centers, located in Weston and Miramar are now in the development stage. BCC also offers classes throughout the County.

Located in South Florida and stretching 25 miles north to south and 50 miles east to west, Broward County consists of 30 municipalities and almost 1,200 square miles. Only the eastern portion (410 square miles) is developed, however. The remainder, nearly 65 percent of the County total, is a conservation area consisting of everglades and mangrove swamps. Land scarcity, as a result of environmental restrictions to protect this area is driving land and housing values upward. Palm Beach County lies to the north and Miami-Dade County to the south. The Atlantic Ocean marks the County's east border.

Headcount enrollment at Broward Community College has increased by 27.8 percent since the 1993-94 year. Unduplicated enrollment for 2003-2004 was distributed as follows: Central Campus 16,798, South Campus (including the Pines Center) 10,180, North Campus 13,713, and the Willis Holcombe Center (downtown) 2,208. Broward Community College also serves an additional 10,000 students through its noncredit programs mostly by operating industry certification testing. In 2002-2003, Broward Community College produced the 3rd highest total number of associate degrees among the nation's community colleges and was second in nursing associate degrees. The College operates or is affiliated with college programs in Ecuador, India, Singapore, Spain, Sri Lanka, and the United Arab Emirates. BCC is fully accredited by the Southern Association for Colleges and holds specialized accreditation for its Dental Hygiene and Assisting programs (American Dental Association), Emergency Medical Services (Commission on EMS Programs (CoEMSPA)), Medical Assisting and Diagnostic Medical Sonography (Commission on Accreditation of Allied Health Education Programs (CAAHEP)), paralegal program (American Bar Association), Physical Therapist Assistant program (Commission on Accreditation in Physical Therapy Education (CAPTE), and nursing programs (National League of Nursing).

Reflecting Florida's relatively strong economic performance even during the downturn that began earlier in this decade, Broward Community College's finances have been stable for a period of years. Student tuition and fees, coupled with state general fund support, have been major revenue sources. The Broward College Foundation has been successful in raising scholarship dollars for students but fewer resources to support new initiatives. In an effort to improve its ability to raise external resources, the College is now engaged in increasing efforts to raise money through federal grants. The District Board of Trustees of Broward Community College, known as the Board, recognizes the United Faculty of Florida, Broward Community College Chapter, as the exclusive collective bargaining representative for faculty with respect to wages, supplements, hours, and other terms and conditions of employment.

Prior to the massive development that has marked South Florida's history over the past fifty years, Broward County was an agricultural area producing row crops and cotton. Today, most farm land has been developed, leaving equine, seafood and nursery crops as the County's agricultural products. Agriculture has been replaced as an employment base by tourism, transportation, and services. There are 266 linear miles of canals within the County of which 126 miles are navigable. A Seminole Indian Reservation in Hollywood consists of 497 acres. Interstate Highway 95 and the Florida Turnpike run through Broward County from north to south. Interstate Highway 75 runs from east to west.

Continued population growth spells opportunity for Broward Community College. Geographic Information System (GIS) maps appended to this report reveal that the perimeters of the County are becoming more ethnically and racially diverse. Adaptation to new demographics, the sheer numbers of off-shore immigrants as well as persons migrating to South Florida over the next 20 years will require continuous planning and innovation by the College and its partners. Decisions made in the short-term are critical and will determine the shape of the College over the next several decades. Fortunately, the basic elements needed to address future growth are in place. Broward Community College is engaged in essential thinking about its future and its contributions to Broward County, the State of Florida, the nation, and an increasingly global world. The College has made public commitment to the Learning College philosophy in which all the evaluation of all services is tied to maximizing student learning. A recent transition in leadership has expanded the use of planning, the need for information to guide that planning, and strategy to address the future.

In August 2004, the College contracted with Voorhees Group LLC to facilitate the development of an Education Master Plan to address the college's capacity to respond to estimated growth in Broward County to assist the College to make strategic choices about its future. This process of establishing the Education Master Plan consisted of eleven (11) strategy sessions conducted throughout the County from September through December as well as extensive conversations with College administrators, faculty leadership, and students. Additionally, business leaders, economic development specialists, and personnel from the public school system were interviewed as were

university administrators from Florida Atlantic University, Florida International University, and Nova Southeastern University. Data and information were drawn from Broward Community College, the Florida Department of Education, Division of Community Colleges and Workforce Development, and from local, state, and federal databases available through the Internet. These information-gathering processes converge in this document.

BCC previously had embarked on a strategic planning process in 2001 in response to accreditation requirements by the Southern Association of Colleges. That process had produced a number of goals and activities that were designed to integrate responsibilities across this complex organization.   Those activities that represent strategic choices--as opposed to operational activities--appear in the recommendation section of this report. At conclusion of this Education Master Plan, BCC anticipates developing a facility plan that will be driven by the analyses and conclusions found herein.

Timing is especially good for this effort. The Florida Department of Community Colleges and Workforce Education has embarked on revising its statewide strategic plan for community colleges. This process began in October 2004, after Broward Community College's began formulating its Education Master Plan, when the System's Chancellor appointed a Strategic Planning Task Force. It is anticipated that this statewide work will be concluded spring of 2005 with recommendations to come to the State Board of Education for its adoption. College District Boards of Trustees will then be asked to spend the following six months to develop institutional plans to respond to the state plan. Although it is too early in the process to predict the framework for the state's plan, because of its work in developing its Education Master Plan, the College will be in a strong position to respond quickly to the state's request and, in fact, will be able to offer technical assistance to the department and other Florida community colleges based on this experience.

Specific tasks and questions that the College asked to be addressed during this Master Plan process include:

1.   Help Broward Community College to understand the populations and subpopulations that it is not now serving.
2.   What will be the projected needs for community college programs and services for Broward County the next ten years? And, beyond?
3.   How can BCC meet needs for education through programs, support services, organizational development, technology, staffing, and marketing?
4.   What programs and services will BCC need to develop to meet the varied needs of locations within Broward County?
5.   Conduct a series of staff and community focus groups throughout the County to assess unique needs and preferences for current and new programs.

6.   Collect and analyze information external to the College including the County's K-12 education sector, economic development organizations, competitor higher education institutions, and state government employment projections.

7.   Provide BCC with an analysis of future demand for programs and services as well as an assessment of institutional capacity to meet that demand. Included here are:

   a.   How responsive are current credit career and technical programs and noncredit programs to business/industry needs?

   b.   What new programs need to be developed to meet emerging workforce needs?

   c.   What programs must be downsized or altered to meet workforce needs?

   d.   To what extent do support services meet current student needs as well as future needs?

   e.   Is the organizational structure of BCC developed to carry out program expansion?

8.   Develop projections for student enrollment, instructional space, existing programs, support services, and educational delivery systems in existing locations and in new centers.

9.   What policies and marketing strategies will BCC need to develop to meet customer needs for education through 2015?

10.   What planning and assessment processes are necessary for the College to meet its obligations to citizens of Broward County? How can BCC most effectively integrate its planning and budget setting processes?

11.   Develop a final report combining analyses and projections into a comprehensive Education Master Plan for Broward Community College and recommend steps to embed Education Master Plan goals within the College's ongoing operations and budgeting cycles.

VISION STATEMENT

January 2005

It is now the year 2015. Ten years ago, Broward Community College placed student learning at the heart of all decisions. It was the right thing to do. Leadership recognized that the students BCC served in 2005 were much different from those it first served when its doors opened in 1965. Massive demographic changes in South Florida brought learners to the College that were lacking in college-level preparation. Other learners were attracted to BCC because it was a respected place to begin a 4-year degree. Other learners were not interested in degrees or transfer but sought quality learning experiences to support their life and/or career goals. Regardless of their goals, these new learners were more technologically adept than their predecessors. Using a deep understanding of existing and potential learners, BCC worked hard to match content and delivery to their needs, preferences, and circumstances. BCC also was diligent in creating new networks of businesses, community-based organizations, public sector employers, and other learning providers. These networks flourished to create new opportunities, propelling the College's efforts to manage its future to new heights. Strategy now is everywhere. It is no surprise that enrollment has swelled beyond expectations in ten years. BCC has become the national model for community college renaissance.

By the year 2015, Broward Community College will have increased its enrollment by more than half. While it is focused on the educational needs of Broward County and South Florida, learners throughout the nation and the world engage with the learning opportunities it has created. It has reached this landmark by building on networks that are marked by excellence in teaching and learning, creativity in nurturing quality partnerships, and by placing the needs of its current and future learners first. BCC has become a key resource in a knowledge-based economy that can create, and keep, high skilled jobs. Because it creates its own future, it serves as a model for its partners. Broward Community College is the epicenter of a growing number of networks. Relying on these networks in the same way that other parts of these networks now rely on BCC, the College has become adept at identifying new opportunities and in pursuing the entrepreneurial partnerships necessary to pursue these opportunities. College-wide improvements since 2005 are both tangible and measurable.

Sweeping changes in demographics, attitudes toward learning, and shifting labor markets predicted in 2005 have come to pass. Fueled by natural population increases as well as in-migration from other states and throughout the Caribbean, Central and South America, as well as other countries, South Florida is now the most racially and ethnically diverse region in the nation. Population density has increased pressure on commuting patterns. Most workers do not commute to an identified core. Rather, they commute from suburb to suburb in the Tri-County area, beyond the reach of efficient public

transportation. While improvements have been made in the transportation infrastructure since 2005 residents of the County are still confronted with congested streets and time-consuming travel to jobs, schools, shopping, and leisure pursuits. The largest cohort of Internet Users, aged 18 to 24 in 2004, is now in its early working careers. Those that have come behind are even more tech savvy. The College has capitalized on this and other demographic realities in matching the format and delivery mode of its classes. Creative thought has been required and the College has delivered unselfishly. South Florida has been a bellwether for dealing with massive change that is now being experienced in other regions of the United States and which will soon be the reality for the entire nation.

Over the past ten years, learners and prospective learners--regardless of economic circumstances--have become extremely sophisticated about the quality of educational opportunities and have made decisions about where to find value. Competition, especially from more costly providers is everywhere. In response, Broward Community College has gained a deep understanding of learner needs and has configured its learning opportunities accordingly. This approach has served the College and its network partners well. South Florida now is viewed as a national testbed for how nimble partners can come together to increase economic opportunities while adding to the quality of life for all citizens. The College is deservedly proud of its role in developing an educated, skilled workforce and by improving access to quality jobs. Because it has worked tirelessly with its partners, Broward Community College also has advanced their success and, in turn, the success of those that they serve. Old problems that could not be solved in isolation by any one entity are now seen as opportunities.

Broward Community College forged strategic partnerships from necessity. As one learning organization in an expanding tide of alternative providers, it understood the need to develop niche opportunities. It created new programs where justified and strengthened programs that meet new needs. BCC was also been unafraid to eliminate programs that serve neither students nor the community well. The College actively uses all of the information gathered from its networks to embrace technology that enhances learning. Awareness that it could not meet every education need resulted in an expanded number of partners, from traditional universities to community based organizations. The College selected those partners that met its same commitment to quality while seeking to lowering barriers for learners. Learners throughout the College expanding networks can access quality learning content and have that content distributed to them in ways that match their interests, needs, and lifestyles.

These changes did not just happen. Ten years ago, Broward Community College made fundamental choices about its future. It unflinchingly faced the reality of an increasingly diverse population base and the opportunities those changes brought to expand BCC's role as a human maximizing organization. Pushing the boundaries of its traditions, the College began to view itself as much more than an institution whose prime mission was to prepare its students for transfer to 4-year institutions. Focusing on what

was important to students as a foremost strategy, BCC determined that it would resist "mission creep" and, instead, make student success its first priority.

In a series of steps guided by its own research, Broward Community College recognized that the future of all of its programs as well as the health of the region depended on the success of students who would not be able to cross the threshold to transfer and/or high skills programs without remedial help. Broward Community College with its partners has focused on inner-city and suburban public middle and secondary schools where dismal student performance has meant disaster. It has partnered in efficient ways with the Broward Public School District to create Early College models that have made significant progress in ensuring that secondary graduates are prepared to meet the challenges of the future. The College placed a premium on the programs and support services that spelled success for remedial students. Rather than focusing on the causes or looking for places to blame, BCC actively began to search for solutions in conjunction with its partners.

Strategy at all levels now permeates the College's fabric. BCC is guided by data and information gathered internally and throughout its networks. The College regularly takes its own pulse and makes appropriate adjustments. It assesses student learning outcomes, evaluates its progress on strategic goals, and makes revisions to its strategies each year. It allocates necessary resources to achieve goals and, where its resources fall short, it raises resources through opportunities found in, or created by, the entrepreneurial networks it has built. Continual alignment of services and programs to first meet the needs of learners has institutionalized the change process at BCC so that dealing with new realities is second nature. Students, employees, and external stakeholders participate as full partners in that change. The College's success in managing change is known locally and throughout the United States, placing it without peer when solutions to intellectual, cultural, social, and economic challenges are sought. Broward Community College constantly monitors trends both within the college and throughout the networks it has built. The ability to anticipate changes in its environment has spawned new opportunities and new networks. The future for Broward Community College in the year 2015 looks brighter each year.

ENVIRONMENTAL SCAN

No organization can plan effectively without understanding its environment. Internal and external factors dictate how an organization operates in the "now" and the information it needs to direct its future. The most pressing change facing Broward Community College is a profound shift in demographics which will cause the College to respond with both a larger volume of program and services as well as different types of programs and services. An effective plan should identify these likely differences through environmental scanning and seek to understand where similarities among future students and programs may lie.

<u>Demographics</u>

Broward County grew by 29 percent in the 1990's to 1.6 million residents. Growth is predicted to slow to 16 percent during the present decade but will still represent a population increase of more than 300,000 people, an average of 30,000 people each year.[1]

From 2000 to 2003, Fort Lauderdale increased its suburban minority percentage (from 23.7 percent to 41.9 percent) more than any other metropolitan area in the United States.[2]

Most of Florida's population increase during the 1990's was because of net immigration (85.3%) and not natural increase (14.7 percent, the difference between births and deaths).[3]

Predicted adult population growth in Broward County through the current decade will be uneven. The largest increase will be 50 to 64 year-olds (49.9%) while the proportion of 30-39 year-olds will decrease (-8.9%). The 65 year-old plus cohort will lag overall growth to the year 2010 but thereafter will experience the largest growth to year 2020 and 2030.[4]

Despite higher proportions of bachelor and graduate degrees than national averages, a significant proportion (29.5%) of Broward County residents have attained only a high school diploma or less.[5]

Nationally, two-thirds of the 50 largest metropolitan areas had fewer young adults in 2000 than in 1990. These cities now realize that they've done little to appeal to the labor force that will shape their economic future: educated 25- to 34-year-olds.

Broward County experienced a modest gain of 7 percent during this period but this increase did not keep pace with overall population growth.[6]

Nearly twice as many workers commute out of Broward County than commute to the County for work (177,731 v. 97,781).[7]

In 2002, the number of domestic in-migrants to Broward County was nearly identical to the number of out-migrants.[8]

In-state residents account for most of Broward County's domestic in-migration. Miami-Dade (67%) and Palm Beach (14%) account for 8 of 10 Broward domestic immigrants from Florida. Palm Beach (34%) and Miami-Dade (29%) account for 6 of 10 out-migrants from Broward County.[9]

Broward County attracts families seeking better economic opportunities. Broward County residents moving to other Florida Counties have higher median household incomes than those Floridians who migrate to the County. Similarly, those who migrate to Broward County from other states have lower median household incomes than those Broward County residents who leave for other states.[10]

In 2003, 80 percent of the people in Broward County were living in the same residence one year earlier; 12 percent had moved during the past year from another residence in the same county, 3 percent from another county in the same state, 3 percent from another state, and 1 percent from abroad.[11]

Immigration plays a major role in the culture and future of Broward County. In 2002, the largest migrant category to the Fort Lauderdale MSA was Caribbean (44%), chiefly from Jamaica and Haiti. Other immigrant regions include South America (27%), Asia (10%), Europe (8%), and Central America (5%). [12]

Three of ten persons in Broward County (29.4%) were born outside the United States. This rate is higher than Florida (17.6%) and the nation as a whole (11.9%).[13]

Four in ten households in Broward County speak a language other than English. This rate is significantly higher than either Florida or United States statistics for 2003. The most predominant non-English language is Spanish (18.6%), followed by other Indo-European languages (10.1%).[14]

The Florida economy attracts workers from all over the world. Over one in five workers was born outside the U.S. representing more than 85 countries. Almost one-

third of the foreign-born workers in Florida were born in Cuba or Haiti. After Cuba and Haiti, the next five largest groups of immigrants were from Jamaica, Mexico, Columbia, Nicaragua, and Germany.[15]

The proportion of Broward County Hispanics and Blacks will grow at an equal rate through the year 2030.[16]

By the year 2020, Whites will be the minority group in Broward County. The Black proportion will equal the White proportion by 2015; by 2025 the Hispanic proportion will equal the White proportion.

Currently, school-age Blacks and Hispanics (5 to 17 year-olds) in Broward County combine to outnumber Whites. By 2020 they will separately outnumber Whites.[17]

Minority subpopulations are dispersed throughout the County but are most concentrated at the County's center, especially immediately west of downtown Fort Lauderdale.[18]

The overall BCC participation rate for fall 2003 of Broward County residents over the age of 18 in the College's credit programs was 2.47 percent. The participation rate for females, Black Non-Hispanics, and Hispanics is higher than for males and other racial and ethnic categories.

Economy

Although Broward County's per capita income exceeds both the Florida and United States average, wealth is not distributed evenly throughout the County. Most low-income areas are located near downtown Fort Lauderdale while high-income areas are located in the western portion of the County especially at the edges.[19]

Fort Lauderdale was ranked 30th in a recent ranking of 296 U.S. metro areas according to wage and salary growth, job growth and high-tech output growth. Fort Lauderdale's concentration of high tech firms, however, lags the national average for cities by 22 percent.[20]

Since 1990, the mix of employment by industry has changed in Broward County. Manufacturing jobs, led by downturns in computer and electronic product manufacturing, have declined significantly. Jobs in the retail trade have increased in

number but have not kept pace with overall job growth. Industries in which jobs have increased include business and professional services and local government.[21]

Sixteen (16) percent of the new jobs that will be created in Broward County through the year 2011 will require a bachelors degree or higher. The remainder (84%) will require an associate degree or less. Most of these new jobs will involve on-the job training.[22]

Statewide, the middle range of the 25 to 59 age group, the prime labor force age, will decrease between 2000 and 2010 (45.1% v. 26.7%), raising concerns about the state's available workforce.[23]

Broward County will experience a significant decline (-8.2%) in the 30 to 39 age group between 2000 and 2010.[24] This decline has substantial implications for employers and the future of workforce development in the local labor market.

Nationally and globally, employers are focusing on skills vs. degrees and certificates. Programs and curricula are needed that respond to changing industry demands. Programs demanded by employers are unlikely to match the traditional academic calendar and delivery modes.

Broward County is within eight years of exhausting its available vacant land. Market pressures to redevelop land throughout the County will drive real estate values higher, accelerating the gap between low-income and affluent families.[25]

Strong housing demand continues in Broward County, but a recent decline in new construction permits has been experienced owing to the shrinking availability of land.[26]

South Florida residents waste an average of 52 hours a year tied up in traffic, 13 hours more than 10 years ago and 41 hours more than 20 years ago. South Florida also ranks sixth nationally in travel delays, wasting 221,000 gallons of fuel each year, and costing $2.56 billion.[27]

Trends in the unemployment rate in Broward County have mirrored the rate for the United States since the year 2000. Broward's rate since 2000 through 2003 has been 3.7, 4.9, 6.0, and 5.7 percent, respectively. The United States' rate has been 4.0, 4.8, 5.8, and 6.0 percent.

It is estimated that Fort Lauderdale will experienced a record tourism year in 2004 when 8.75 million visitors are anticipated. Several new, upscale hotels and resorts have come on line, boosting the room inventory by 1,250 rooms. New rooms will increase the city's tourist capacity while adding new revenues to city's bed tax collections.[28]

Tourists visiting Broward County's beaches spend nearly 2.0 billion during their stays. Nearly 60 percent of visitors to Southeast Florida beaches are from out-of-state while 31 percent are from Florida. Ten percent of beach visitors are international.[29]

Fort Lauderdale-Hollywood International Airport is one of few large hub U.S. airports to experience positive growth in passenger traffic and seat availability since 9-11. In 2003, nearly 18 million passengers passed through this facility.[30]

Port Everglades, located in Fort Lauderdale, provides more than 19,000 jobs through cruise travel and international trade. Nearly 6,000 cargo and cruise ships call on the Port annually. The port is a competitive containerized cargo facility, ranked 12th in the United States. [31] For the calendar year through July, Port Everglades said it has set a record among the nation's top 15 container ports with a 22 percent increase in containerized cargo from 2003 to 2004.[32]

On a typically Sunday during season, Port Everglades services 10 to 12 cruise ships and 30,000 to 35,000 cruise passengers. The top 10 countries primarily trading with Port Everglades are located in Central America, South America, and the Caribbean. [33]

Port Everglades earned record revenues in 2003 of $92 million, up 3.4 percent from 2002. Cruise travel is the highest single source of revenue making up 27 percent of revenue, not to mention the multiplier effects of money spent by cruise passengers and the ships' crews, both passenger and cargo, that tour and shop locally.[34]

<u>K-12 Schools</u>

Serving more than a quarter million students, the Broward County Public School District is the 5th largest K through 12 system in the United States. The Miami-Dade School District ranks 4th. [35]

The Broward County schools experienced explosive student population growth than Miami-Dade County schools between 1993 and 2001. The county's enrollment grew 35 percent between 1993 and 2001.[36]

Enrollment in grades 9-12 for Broward Public Schools is projected to grow by more than 5,700 students and then plateau during 2006-2007. Growth in these grades is predicted to decrease by 147 students in 2007-2008.[37]

Statewide, the proportion of minority young adults (18-24) holding a high school diploma has declined over the past decade (78.2 to 75.6%)[38]

Statewide, significant gaps exist between race/ethnicity status and enrollment in upper-level high school math and science classes. Hispanics in the 9th to 12th grades are only about three-quarters as likely as Whites to enroll in upper-level science and math courses. Blacks are only about two-thirds as likely to do so.[39]

About 16 percent of Broward County children under age 18 live in poverty, compared with a statewide rate of 19 percent.[40]

Compared to statewide statistics, more students in Broward County Schools take the SAT test (53.9 v 47.3%) and continue their educations (62.6 v 57.9%). At the same time, students in Broward County Public Schools are more likely to be limited in their English proficiency (6.9 v 5.0%) and to be absent more than 21 days (17.6 v. 14.5%). The ultimate test of secondary schools is their rate of graduation. On this measure, Broward County Public Schools lag the statewide figure by more than 6 percent (62.7 v. 69.0 graduation rate).

There is a gap between the competency standards measured by Florida Comprehensive Assessment Test required of 10th graders and the remedial standards in use by Broward Community College.[41]

The State Constitution was amended in November 2002 establishing, by the beginning of the 2010-2011 school year, the maximum number of students in core-curricula courses assigned to a teacher in each of the following three grade groupings: (1) Pre-kindergarten through grade 3, 18 students; (2) grades 4 through 8, 22 students; and (3) grades 9 through 12, 25 students. Through 2004, the Broward School District had met its class size targets. The long-term effect of this amendment is unknown.

Florida's Bright Futures Scholarship appears to have the effect of increasing the number of standard high school diplomas statewide while the proportion of those graduates who are eligible to receive a Bright Futures Scholarship remained constant.[42]

The Bright Futures Scholarship is based largely on academic performance in high school. The development of financial aid programs that focus on students' financial need may be necessary to ensure access to college for all qualified students.

Early college models in use by leading community colleges have shown great promise in increasing the number of low-income students who will access higher education. This model bears serious consideration by BCC and its partner secondary schools.[43]

Public Policy

Access vs. success will continue to be an issue. There is mounting pressure to increase success but at the same time the basic community college mission mandates open access for all students.

The fragmented nature of political subdivisions of South Florida has hampered efficient land use and regional transportation planning.

Net college costs for Florida low- and middle-income students to attend public two- or four-year colleges represent nearly 40 percent of their annual family income, even after accounting for Bright Futures scholarships. Over 80% of the students in the state attend these institutions. (Net college costs equal tuition, room, and board minus financial aid.)[44]

The College's external stakeholders will continue to treat education as one of its top concerns.

Florida is the top-performing state in the percentage of first-year students in community colleges who return for their second year. Over the past decade, this percentage has increased substantially, in contrast to nationwide declines on this measure.

Statewide, the percentage of working-age adults who are enrolled part-time in education or training beyond high school has declined by 11 percent, matching the nationwide decline on this measure.[45]

There are other education providers offering programs and services similar to those provided by Broward Community College that are available to the County's potential student population.

More than 110,000 students (new freshmen plus prior recipients) received a Bright Futures Scholarship for the 2002-2003 academic school year. Of the total, 18 percent used the scholarship at a community college, down from 20 percent during the 1999-2000 academic year.[46]

Florida is a frontier state in permitting community colleges to offer baccalaureate programs. Presently, there is discussion on broadening this program through legislation.

There are discussions within Florida about capping the number of credit hours that it will reimburse 4-year institutions for students who prolong degree completion. This may spill over to community colleges.

<div align="center">Social Trends</div>

There is an increasing use of computers in homes. However, this access to technology is not evenly distributed across all income groups. The divide between technology "haves" and "have-nots" within Broward County will continue.

There is an increasing gap between those who are economically disadvantaged and those who are not. In-migration of affluent households will increase this gap.

The ways in which Americans work are shifting dramatically. Leading this shift are the nearly 38 million Americans in many diverse fields who create for a living, known as the "Creative Class." The rise of the Creative Class, now thought to number more than 30 percent of the total U.S. workforce, has and will continue to produce fundamental economic change.[47]

The need for job training programs, skills certificates, and other programs with fewer general education requirements will increase. Those who have obtained these skills may seek opportunities for career development, general education and lifelong learning that can lead to higher levels of degree attainment.

The need is increasing for community colleges to form partnerships with local industry, service providers, including health providers, and governmental organizations in order to conduct contract education.

Faculty hiring practices need to respond to the fact that nationally 50 percent of full-time faculty will be retiring in the next 10 years.

Short-term (occupational/certificate/licensure) students and part-time students will place the same demand on student services as full-time students.

PLANNING ASSUMPTIONS

Planning assumptions use the information from the environmental scan to establish a foundation for the Education Plan. The assumptions developed below will help guide the College's efforts to respond to changes in its internal and external environments.

- Although BCC will compete with new and existing providers for students, the College will serve as the primary vehicle for access to higher education in Broward County.

- Increased competition for students means that BCC will need to increase its efforts to recruit new and retain existing students.

- New students will want course choice and convenience. When alternative providers are clearly available, they will make their choices about institutions based on these factors.

- Emphasis will increasingly shift at the College to meeting student needs as the centerpiece for all operations.

- Increasing the College's participation rate is critical. Even a modest increase over the current participation rate will add significant numbers of new students. The college can utilize enrollment management techniques to increase its overall enrollment and to specifically target new programs and students.

- There will be continued population growth in Broward County through the year 2030, especially among minority groups. Further, significant migration from other countries, especially the Caribbean and Central America, will continue. BCC will become even more diverse as a result.

- Broward Community College will continue to serve as the point of entry to post-secondary education for high school graduates who cannot afford, be accommodated by the Florida State University System or who are not ready for the University

- Secondary schools in Broward County vary dramatically in their performance. As a result the pool of recent graduates that enter Broward Community College will have needs ranging from profound remedial deficits to the need for honors programs.

- Students will continue coming to the College with low skills in English, math and general sciences. For example, there will be an increased demand for English as a Second Language instruction. Higher proportions of students will have childcare needs that translate into demand for resources.

- Early College High Schools have the potential to improve high school graduation rates and better prepare students for family-supporting careers by changing the structure of the high school years, compressing the number of years to a college degree, and removing financial and other barriers to college. This model bears serious consideration by BCC and its partner secondary schools.

- Learning is life-long. There will be a constant need to retrain and refresh workers and others as technology evolves.

- Younger, incoming students will be "digital natives." They will be computer literate and expect more from technology at Broward Community College.

- Students without access to technology will rely upon the College to provide it. Technological "have-nots" throughout the County may come to expect that Broward Community College can serve as a gateway to technology.

- To keep pace with societal trends, course offerings should include a variety of learning modalities including, but not limited to, distance learning alternatives. These alternatives should include synchronous as well as asynchronous modalities.

- A significant proportion of Broward county residents will continue to commute to jobs in Miami-Dade and Palm Beach Counties and their commute times will continue to increase. The College will need to be creative in meeting their needs.

- As population density and traffic congestion in South Florida increases there will be expanded interest in educational opportunities that match their schedules among residents in creating employment opportunities nearer to where they live and, in many cases, creating and/or enhancing opportunities to work from their homes.

- Although the trend and demand for online learning and learning paradigm shifts is strong and positive, the basic course delivery mechanism in community colleges will remain traditional, requiring renovated and additional space.

- The population growth in the foreseeable future will continue to translate into high demand for local service industries and for expanded services by local government.

- Certain occupations will experience the greatest growth. The College will want to ensure responsiveness and quality in related instructional programs:

registered nursing, general healthcare, customer service, elementary and secondary teachers, sales, food preparation and hospitality, construction, landscaping, plumbing, and transportation.

- Broward Community College will play dramatically expanded role in assisting Broward County to attract new businesses and to train their employees. Creation of new partnerships with private sector businesses and industries may be necessary to provide focused, short-term training demanded by businesses and industry.

- Eighty-four (84) percent of the new jobs produced in Broward County to the year 2011 require an associate degree or less. BCC is in a strong position to train new workers as well as to influence local labor markets by working directly with employers to offer appropriate training opportunities.

- New facilities will need to be constructed and existing facilities renovated to accommodate anticipated growth. However, maximizing present facilities with creative scheduling and course content should be the first order of business. When new facilities are constructed they will need to be expandable to meet the needs of the population in their vicinity, well equipped to parallel technological advances, and scalable to match a variety of learning activities and modes.

CURRENT STATUS

The byword for Broward County is change. Over the past two decades the composition of the County has shifted dramatically.   It is now older and more racially and ethnically diverse. These changes have been felt at the College and will continue to have a large impact during the planning period. This section of the Education Master Plan is supplemented by Appendix A which provides a range of Global Information System (GIS) maps of Broward County that depict income, education, race/ethnicity, and age by Census Tract.

Age and Gender

A gradual shift to the upper end of the age distribution has marked Broward County over the past 20 years. This is due to the aging of the Baby Boomer Generation and their children (the "Baby Boomer Echo"). The total population of Broward County, ages 15 and older is expected to grow almost 50 percent over the next twenty-seven years. The largest growth, however, is predicted for persons in the age category 55 and older, and just modest growth forecast for ages 35 to 54. Between 2003 and 2030, there will be a significant increase in the percentage of the county's population that will be in the age category 55 and over, and a corresponding reduction in the share of the population between ages 35 and 54. The share of the population between ages 15 and 24 is projected to increase modestly through 2015 and then return to present levels. Table 1 shows that BCC serves a larger proportion of younger learners than available older learners in the County. The College's current gender balance runs 62 percent female and 38 percent male, an imbalance with the gender proportions in Broward County (48.4% male and 51.6% female).   No significant gender shift is forecast for the planning period.
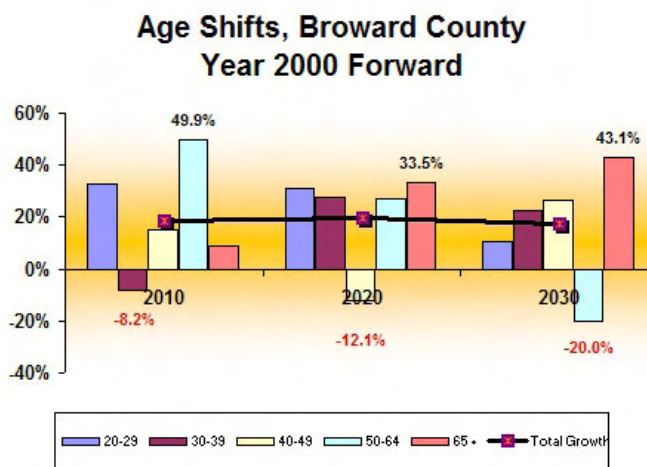
Table 1. Comparison of Broward County Population Ages 15+ and BCC Enrollments by Age, 2003		
Age Category	% in Broward County	% of BCC Enrollment
15 to 24	15.2%	57.5%
25 to 34	16.3%	24.7%
35 to 54	37.7%	16.8%
55 and over	30.9%	1.0%
Source: US Census American Fact Finder and BCC Enterprise		

Gender Distribution, Fall 2003

Male
38%

Female
62%
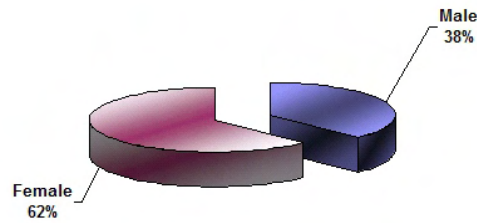
Source: BCC Enterprise Business Intellegence

Race and Ethnicity

Broward County is ahead of the racial and ethnic wave which will wash across the United States in the next several decades. Nearly one-third of the County describes itself as minority, ahead of Toronto, Canada, which is widely known as one of the most racial and ethnically diverse locations in the World. More than 9,000 students from more than 150 countries attend BCC, many of whom speak English as a second language. The recipe for America's diverse future is now under construction in Florida's community colleges. Eighty (80) percent of the minority students served by public colleges and universities in Florida begin their postsecondary education at a community college.[1] The future economic consequences of diversity are great. It is estimated that if all ethnic groups had the same educational attainment and earnings as Whites, total personal income in Florida would be about $15.3 billion higher, and the state would realize an estimated $5.4 billion in additional tax revenues.[2] The figures below forecast the changing demographics of Broward County in two critical cohorts, school age and traditional college age cohorts.[3] Racial and ethnic parity in the County will be first realized with young children and then move in succeeding years to young adults.

Broward County Residents Ages 5-17, Race/Ethnicity 2000 to 2030
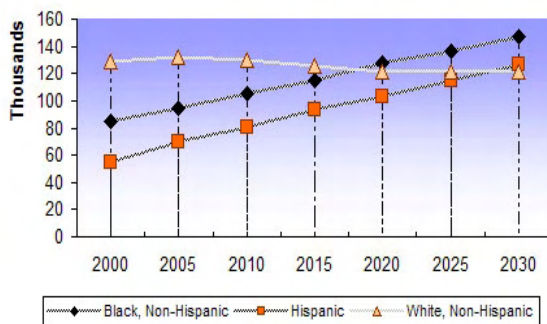
Broward County Residents Ages 18-24, Race/Ethnicity 2000 to 2030

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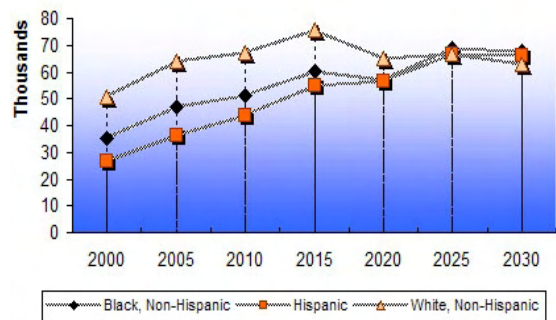
[1]Florida Community College System, 2004

[2] National Center for Public Policy and Higher Education (2004). Higher Education Measuring Up 2004

[3]All population projections in this report are based on Bulletin 139, Population Projections by Age and Sex for Florida Counties published by the Bureau of Economic and Business Research, University of Florida .

**Growth Rates, Race/Ethnicity
Broward County, 2000 to 2030**

Source: Bureau of Economic and Business Research, U of FL
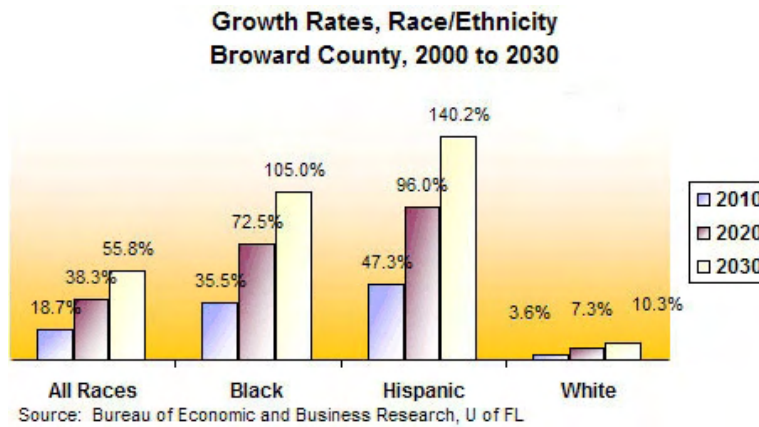
Broward County will grow by half until the year 2030 when continued growth for Hispanics will outstrip both White and Black subpopulations. At the present time, BCC enrolls higher proportions of minority learners than their overall representation in Broward County (Table 2). This trend will continue.

Table 2. Minority Enrollments v. Broward County Proportions		
	BCC	Broward County
American Indian	0.3%	0.2%
Black	28.8%	23.8%
Asian	3.6%	2.8%
White	41.6%	68.1%
Hispanic	26.2%	20.3%

Demographic shifts in the County have resulted in dramatic shifts in the number of Black and Hispanic learners enrolling at BCC over the last three (3) years. The proportion of Black and Hispanic students have increased by more than 40 percent. The proportion of Native American students, although low in absolute numbers, decreased by more than 40 percent.

**Shifts in Race, Ethnicity, and Origin at BCC
Fall 2000 to Fall 2003**
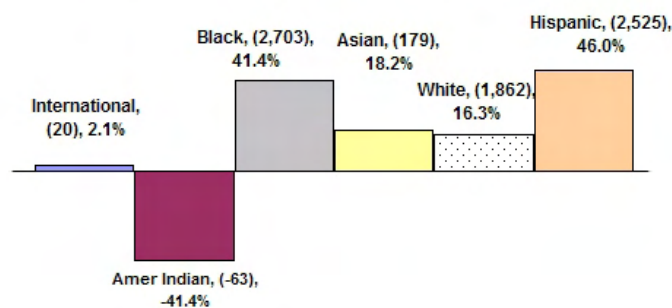
Source: BCC Enterpirse Business Intelligence

International Immigration

The County's diversity arises, in part, from inmigration of persons born in other countries. The top regions of origin for Fort Lauderdale immigrants are the Carribean, and South America. Carribean countries with the largest migration include Haiti, Jamaica, and Cuba. The largest sources of South American migration include Columbia, Peru, and Brazil. Absent changes in immigration law, immigration trends will continue, positively influencing the culture of Broward County as well as providing opportunities for Broward Community College, especially in the area of English language acquisition. The college recently received a federal grant of $475,000 to provide services for refugees.

Immigration to Fort Lauderdale MSA, FY 2002

Bahamas 198
Cuba 662
Dominican Rep 236
Haiti 2,815
Jamaica 2,037
Trinidad & Tobago 333
Other 107

South America 3,831 26.8%
Europe 1,128 7.9%
Asia 1,394 9.7%
Africa 244 1.7%
Oceania 20
Canada 315 0.1% 2.2%
Central America 697 4.9%
Caribbean 6,388 44.6%
Mexico 291 2.0%
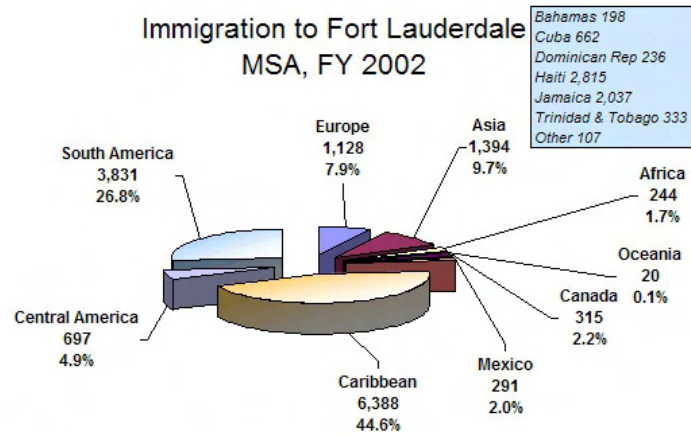
Source: US Immigaration Services. Represents immigrants directly to Fort Lauderdale

Domestic Migration

Broward County is also a destination for persons and families within the United States. About an equal number of Floridians moved to Broward County as left in 2002. County residents that left for other Florida destinations took slightly higher family incomes

Migration Patterns and Median Household Incomes, Broward County 2002

Same State, 43,854 — $25,095
Different State, 38,144 — $25,197
Foreign, 1,380 — $14,270
$26,170
$23,639
$17,756
Foreign, (1,139)
Same State, (42,768)
Different State, (29,894)

Note: US taxpayers in 2002. Source: Internal Revenue Service, State and County Gross Migration.

with them than those that came. At the national level, more persons moved to Broward County than left for other states. The median household income for Broward County in 2003 was $42,659.[4] On average, those families moving into the County are significantly poorer than those who are currently there. Those families moving out of the County to other destinations in Florida are taking higher median incomes with them. These data suggest that families move to the County looking for economic opportunities and, once their economic goals are realized, find other destinations more attractive. If this suggestion is confirmed with other trend data, it suggests a vital role for Broward Community College in promoting both economic opportunities and quality of life within the County.

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[4]U.S. Census Bureau, American Fact Finder

Palm Beach County was a net importer of both Broward County people and income in 2002 (Table 3). More than twice as many people moved into Broward County from Miami-Dade than left for Miami-Dade. Those that left for Miami-Dade County were poorer than those who migrated from Miami-Dade. In contrast, significantly more people left Broward County for Palm Beach County than migrated from Palm Beach County. The County also attracts immigrants from other, poorer Florida Counties who presumably are attracted to Broward County for economic opportunities.

Table 3. Broward County and Florida, Inflows and Outflows, 2002					
Inflows			Outflows		
County	People	Median Household Income	County	People	Median Household Income
Miami-Dade	27,867	$26,228	Palm Beach	14,467	$32,954
Palm Beach	7,329	$26,717	Miami-Dade	12,494	$23,138
Orange	1,244	$18,400	Orange	1,639	$17,974
Duval	599	$27,176	Hillsborough	1,159	$23,967
Pinellas	481	$26,578	Brevard	901	$24,488
Alachua	415	$13,389	Lee	811	$26,206
Other Florida Counties	5,140		Other Florida Counties	9,945	

Temporary Residents

In 2003, Florida hosted more than a million temporary residents, most of whom visit the state in the peak winter months.[5] This number includes persons with working telephones but excludes those individuals living in recreational vehicles and hotels. Most can be found in South Florida and it is estimated that Broward County hosts nearly 60,000 temporary residents each year. In contrast to permanent County residents, these visitors are older (63% are older than 55) and better educated (42% have 4-year college degrees or higher). They also bring higher incomes than permanent residents but are more likely to live in mobile homes.

Because they typically are here less than the length of a standard semester and most would be classified as nonresidents for tuition purposes, temporary residents do not represent a large target market for Broward Community College's credit programs. This is not to say that more flexible educational opportunities including noncredit options might attract their enrollment. Other community colleges in the Sun Belt that have been

[5]Bureau of Economic and Business Research, University of Florida. "Snowbirds and Other Temporary Residents: Florida, 2004." October, 2004.

successful in serving this market have offered short-term classes in local history, flora and fauna, and art.

Prior Education Attainment

The US Census Bureau reports that about 16 percent of the adult population in Broward County has not earned a high school diploma. An additional 30 percent have stopped their education with high school graduation. About 20 percent have attended some college but lack a degree. These statistics point to a large potential adult market that could be served by BCC. Subsequent sections of this report discuss BCC's adult participation rate and provide recommendations for improvement.

The most pressing demographic challenge facing the College is in the area of basic skills. An increasing proportion of First Time in College (FTIC) students are placed into College Preparatory (remedial) classes. More than 80 percent of FTIC students are enrolled in College Preparatory mathematics, English, and/or reading each year. Seven of 10 students requiring College Prep classes are placed into mathematics. Nearly a third need classes in all three areas. At the same time, an increasing number of learners are now entering the College with a General Education Diploma. Realizing that the success of College Prep students affects all other programs, the College has made this preparation for college success a top priority. BCC has been selected as one of 27 community colleges nationally to participate in the Achieve the Dream project funded by the Lumina Foundation. This project seeks to identify the factors that contribute to the success of low-income and minority students within the College Prep curriculum and subsequently in the collegiate curriculum.

Secondary Schools

Broward Community College began as a junior college in 1966, dedicated to providing

Prior Year High School Graduates by Race/Ethnicity Entering BCC

	Percent
White Non-Hispanic	26.7
Black Non-Hispanic	22.2
Hispanic	33.7
Asian/ Pacific Islander	29.7
Amer Indian or Alaskan Native	29.0
Other	21.6
Total	26.6

Source: Florida Community College System. Accountability Measure 1 Part 1. Prior Year Public High School Graduates Enrollment Report by Ethnicity.

Applied and Attended, Recent High School Graduates

	Fall 1999	Fall 2000	Fall 2001	Fall 2002	Fall 2003
Applied	2,830	2,920	2,989	3,341	3,760
Attended	2,199	2,246	2,302	2,489	2,766

Source: BCC Information Technology

transfer programs for students who would pursue a 4-year degree. Since that time, the total curricula has changed to incorporate programs in the career and technical areas and to accommodate the educational needs of students besides those recent high school graduates. Nonetheless, enrollment trends of recent high school students provide one essential mechanism for BCC to benchmark its performance. The overall participation rate of recent high school graduates was 26.2 percent in 2002-2003, a rate that is driven up by the proportions of Hispanic, Asian/Pa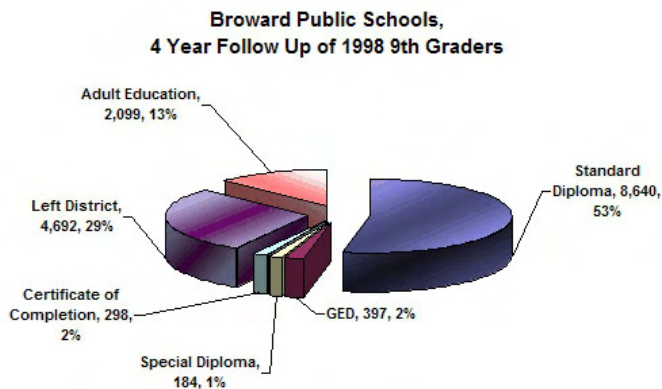cific Islander, and American Indian high school graduates that choose BCC. Blacks, in contrast, appear to lag the overall recent high school graduate participation rate.

The number of recent high school graduates entering BCC has been steadily rising. However, at the same time, the gap between the number who apply and those who eventually enroll is widening. This may reflect a trend toward making multiple applications to colleges and universities by high school seniors. Whatever the explanation, it appears that BCC is not the institution of first choice for recent high school graduates. The Bright Futures scholarship also could be in play as recent high school graduates may find it more possible to attend a university than a community college. Statewide, the share of Bright Future scholars is up overall, but the proportion of those attending community colleges has declined from 20 percent to 18 percent from 1997-98 to 2002-03.[6] It is beyond the scope of this Master Plan to determine the reasons for these shifts. Rather, as a continuously improving institution, the College will want to interview high school seniors to determine their perceptions of competing institutions, where BCC ranks within these perceptions, and why.

Broward County Public Schools (BCPS) is one of the largest districts in the United States, serving more than 270,000 students annually. There are more than 71,000 high school students. Fewer students graduate from the district than the statewide average (62.7% v. 69.0%). Paradoxically, more secondary graduates continue their education than the statewide average (62.6 v 57.9%). Compared with statewide averages, more students are limited English proficient (6.9 v 5.0%) and absent from school 21 or more days

**Broward Public Schools,
4 Year Follow Up of 1998 9th Graders**

Adult Education, 2,099, 13%

Left District, 4,692, 29%

Certificate of Completion, 298, 2%

Special Diploma, 184, 1%

GED, 397, 2%

Standard Diploma, 8,640, 53%

Source: Broward Public Schools, "A Longitudinal Investigation of the 1998 and 1999 Nine Grade Student Cohorts

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[6]Florida Bright Futures Program. Website accessed December 13, 2004 at . http://www.firn.edu/doe/bin00072/bffacts.htm

(17.6 v. 14.5%).[7]   These statistics mask outstanding performance by certain schools but do provide a glimpse of the realities faced both by the school district and the College. According to District data, slightly more than half of all 9th graders earn the standard secondary diploma in four years and may be ready for college work. The district produces about 9,000 graduates each year. BCC and the school district have formed several partnerships including the "College Academy @ BCC," a dual enrollment program at BCC's Central Campus that leads students simultaneously to earn both an Associate and a secondary diploma. About 300 high school juniors and seniors take part in this program each year.   BCC and the district, in cooperation with the League for Innovation, also have formed a "Bridge Partnership" targeting academically-underprepared high school students to increase their rate of college going. The College also operates several pre-college programs including a federal GEAR UP and the state College Reach Out Program (CROP).   The school district and BCC also work together to provide alternative teacher certification through the new Will and Jo Holcombe Institute for Teaching and Learning Excellence.

BCC Transfer Destinations
State University System, Fall 2002

UWF, 13, 0%
USF, 150, 2%
UNF, 31, 1%
FAMU, 36, 1%
UCF, 498, 8%
UF, 186, 3%
NCF, 1, 0%
FSU, 507, 8%
FIU, 1064, 17%
FGCU, 24, 0%
FAU, 3637, 60%
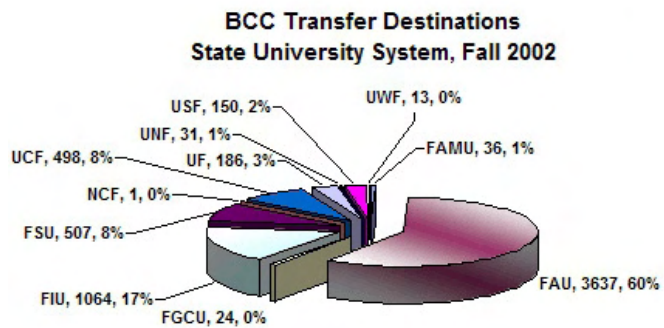
Source: Florida Division of Community Colleges and Workforce Education

Transfer Students

Broward Community College operates strong transfer programs. Students graduating with an Associate of Arts degree are able to enter state-supported and most private 4-year colleges with junior standing.   All public postsecondary institutions in Florida use the state's Statewide Course Numbering System. Twenty-six participating non-public institutions also use this system. College Preparatory (remedial) courses are not eligible for transfer.

Transfer Trends,
BCC's 5 Largest Sources

	1999-00	2000-01	2001-02	2002-03	2003-04
Florida A & M	160	170	197	257	283
FSU	395	398	483	525	563
Palm Beach	1,084	1,333	1,698	2,014	2,331
FAU	4,162	4,957	5,852	6,286	6,632
Miami Dade	1,431	1,863	2,247	2,594	2,710
Unknown	1,583	1,927	2,279	2,272	2,629

Source: BCC Information Technology

About six of 10 students who transfer to public 4-year institutions from BCC enroll at Florida Atlantic University (FAU). Since fall 1997, the number of BCC

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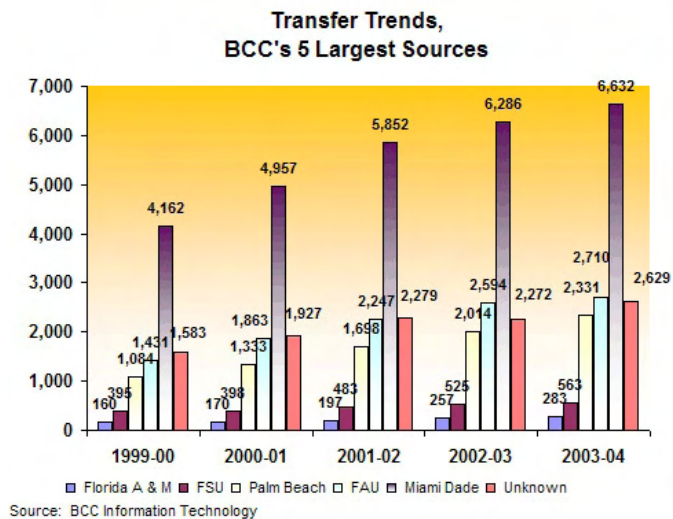
[7]Source: Florida Department of Education, Florida School Indicators Report, http://info.doe.state.fl.us/fsi

students transferring to FAU each year has increased by more than 30 percent. The College shares facilities with FAU at the Willis Holcombe Center and its Central Campus. Following FAU, other State University System destinations include Florida International University (FIU, in Miami), Florida State University (FSU, in Tallahassee) and the University of Central Florida (UCF, in Orlando). No data are available that trace the number of BCC students transferring to Florida's Independent and Private colleges although the statewide figure for 2000 indicate that the total volume of public community college transfers exceeds 1,200 annually. Independent Colleges in BCC's vicinity reported Associate degree transfer numbers for 2000 that are modest when compared to State University System: Barry University (128), Florida Memorial College (83), University of Miami (38), and Nova Southeastern University (10).[8]

Postsecondary students in South Florida are mobile. In addition to being a transfer provider, BCC is also a transfer destination. The largest transfer source for BCC is Miami-Dade College, perhaps the result of the general northward movement of population in South Florida. FAU's close proximity also is a factor in total transfer volume to BCC. The third largest source is Palm Beach Community College followed by Florida State University and Florida A&M., both of which are located in Tallahassee.

Degree Programs

Broward Community College awards the Associate of Arts (AA), Associate of Science (AS), and Associate of Applied Science (AAS) degrees. The AAS degree was implemented in Florida in the 1990's as a terminal associate degree. There are 138 options under the Associate of Arts degree, 32 options under the Associate of Science degree, and 21 options under the Associate of Applied Science degree. BCC also offers three sub-degree options, Certificates, the Applied Technology Diploma, and the Advanced Technical Certificate. There are fewer options available under certificate programs. The general Certificate program has 16 options, the Adult Technical Certificate has eight, and Applied Technology Diploma has one option. This academic menu is top heavy with degree options accompanied by fewer certificate options. BCC might determine whether students and employers prefer degrees more than certificates, especially since certificates take less time to complete. Low degree completion rates in certain career and technical areas may be a symptom of students finding work before finishing a 60-credit hour program or simply leaving earlier once they master their desired skills or competencies. Detailed analyses of program enrollments appear in subsequent sections of this report.

Budgets

Broward Community College commands sufficient resources to enable strategic choices about its future. Enrollments have been steadily growing each year, producing

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[8]The Independent Colleges and Universities of Florida. Accountability Report 2003: Quality, Productivity, Diversity, and Access

both state reimbursement and tuition revenues. In general, the economic status of BCC is tied closely to the economic condition of the State of Florida, a state that weathered the economic downturn that began in 2000 better than other states. BCC received $60.6 million in state appropriations and $34.4 million in student tuition and fees revenue in 2003-2004. Personnel costs totaled $88.6 million during this period of time.

Where indicated, the tables that follow utilize data taken from the Integrated Postsecondary Data System (IPEDS) collection and Peer Analysis System operated by the National Center for Education Statistics. Institutions report these data to IPEDS annually, but there is no oversight for data that may be reported in error. Therefore, although these data have importance, their lack of verification suggests that they should be approached as indicators of the concepts represented, not as data that is 100 percent accurate. These data were used to compared with BCC with other large Florida community colleges in close proximity (Miami Dade College and Palm Beach Community College) and large Florida community Colleges that are also participating in the Lumina-funded "Achieve the Dream Initiative" (Tallahassee Community College and Valencia Community College).

Table 4 presents comparative revenue data. These data indicate that BCC is more dependent on tuition and fees and state appropriations than other large community colleges in Florida while lagging the group average in bringing in federal money. This suggests considerable room to increase entrepreneurial activities at the College, especially to support the strategies found later in this Education Master Plan. The College recently has begun to pursue several large federal grants which, if successful, will alter these proportions in succeeding years. Table 5 presents comparative expenditure data. These data are arranged by standard expenditure categories developed by the National Association of Collegiate Business Officers and show BCC's pattern of internal allocations to be consistent with peers in 2002-2003.[9]

Table 4. Comparison, Revenue Sources, 2002-2003			
	Tuition and fees	Federal operating grants and contracts	State Appropriations
BCC	19.5%	1.9%	39.5%
MDC	15.7%	4.2%	39.9%
PBCC	23.0%	2.1%	46.7%
TCC	11.2%	4.6%	29.5%
VCC	20.5%	0.2%	38.0%
Average	**18.0%**	**2.6%**	**38.7%**

[9]Several of these categories are not self-explanatory. According to NACUBO, Instruction includes faculty salaries, equipment and supplies, and secretarial support. Academic Support includes libraries, galleries, educational media, academic computing support, academic administration, academic personnel development, and course and curriculum development. Institutional support includes executive management, fiscal operations, general administration, administrative computing support, public relations, and development.

Table 5. Comparison, Selected Expenditures, 2002-2003						
	Instruction	Academic Support	Student Services	Institutional Support	Physical Plant	Scholarships and Fellowships
BCC	36.3%	8.3%	9.3%	14.7%	10.9%	12.4%
MDC	39.2%	7.3%	7.4%	13.2%	11.8%	20.0%
PBCC	43.6%	10.8%	13.9%	8.8%	12.1%	10.4%
TCC	30.7%	21.7%	6.8%	16.5%	7.7%	8.0%
VCC	32.3%	10.0%	10.1%	15.7%	13.0%	10.3%
Average	37.5%	9.4%	9.1%	13.8%	11.4%	14.0%

Source: National Center for Education Statistics, Peer Analysis System

Faculty and Staff Resources

Table 6 compares the proportion of full-time employees by primary occupational activity among the peer institutions identified above. Because these data represent but one measurement point, they are unremarkable in their ability to demonstrate differences between BCC and the average for other institutions. A management practice used at some community colleges is to employ technical and professional personnel and/or other professionals to assist with instructional activities under the supervision of faculty.[10] These data indicate that is not the case at BCC where full-time faculty proportions are higher than the peer average.

Table 6. Comparison, Distribution of Full-Time Employees by Activity, Fall 2003							
	Executive/ administrative and managerial	Other professionals	Technical and paraprofessionals	Clerical and secretarial	Skilled crafts	Service/ maintenance	Faculty
BCC	4.4%	19.0%	15.0%	21.1%	4.0%	7.0%	29.5%
MDC	4.3%	16.8%	17.9%	19.5%	3.4%	7.3%	30.8%
PBCC	2.6%	28.6%	9.2%	20.3%	2.7%	11.1%	25.4%
TCC	3.7%	36.5%	12.0%	17.4%	2.1%	7.8%	20.6%
VCC	4.3%	13.7%	14.7%	22.6%	2.5%	11.7%	30.6%
Average	3.9%	22.9%	13.7%	20.2%	3.0%	9.0%	27.4%

Source: National Center for Education Statistics, Peer Analysis System

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[10] Paraprofessionals include persons who are institutionally defined as technical assignments an can include computer programmers (with less than a bachelor's degree) and operators, drafters, technical illustrators, laboratory technicians, and computer lab supervisors. "Other professionals includes persons whose assignments would require either college graduation or experience of such kind and includes librarians, accountants, systems analysts, computer programmers, and coaches.

Consistent with higher proportions of faculty in Fall 2003, Table 7 indicates that Broward Community College also is above the peer average for both full-time and part-time faculty compared to student headcount. It appears that with the exception of South Campus, full-time faculty teach the majority of class sections at Broward Community College.

Table 7. Comparison, Ratio of Enrollment to Faculty, Fall 2003					
	Fall Enrollment	Full-Time Faculty	Part-Time Faculty	Ratio, Enrollment to Full-Time	Ratio, Enrollment to Part-Time
BCC	32,030	330	1,064	97.1	30.1
MDC	58,490	713	3,403	82.0	17.2
PBCC	22,660	223	1,073	101.6	21.1
TCC	12,369	156	399	79.3	31.0
VCC	29,269	317	857	92.3	34.2
Average				90.5	26.7
Source: National Center for Education Statistics, Peer Analysis System					

In Fall 2003, less than half (46.5%) of the sections offered by BCC were taught by part-time, or adjunct, faculty in fall 2003. BCC employs more than 1,000 adjunct faculty who teach across the College's programs. The use of part-timers appears to be consistent with their usage by large community colleges nationwide. The proximity of BCC to universities in South Florida and large employers ensures relatively large pools of faculty with graduate degrees. BCC faces competition from universities that are able to compensate their adjuncts at a rate that is double that provided by BCC. The recommendation section of this report suggests strategies that the College should consider to improve hiring and retention of adjunct faculty.

Sections Taught by Employment Source and Location, Fall 2003

Source: BCC Financial and Human Resources
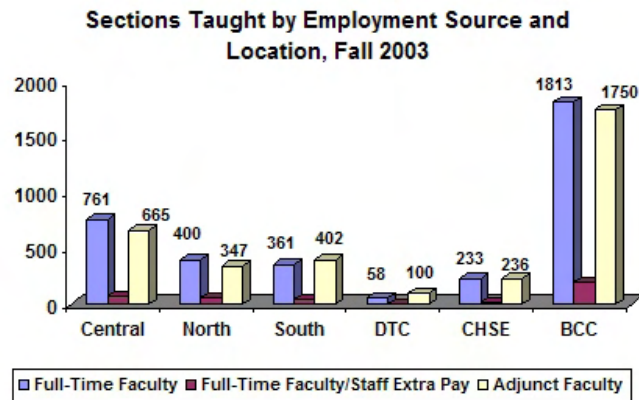
Table 8 depicts the number of employees by category and minority status. Thirty-nine (39.1%) of the total population in Broward County is reported as minority by the US Census estimates. Minority representation in the County is predicted to grow through the year 2030. Currently, the College exceeds the current 39.1 percent proportion in three employment categories and is close in several others. Professional competency and student-centeredness should be the first criteria BCC uses in selecting faculty and other

professionals, especially as they deal directly with an increasingly diverse student body. In conjunction with these critical criteria, progress needs to be made to reach racial and ethnic parity among full-time and part-time faculty. This report later describes strategies the College might wish to take to more effectively recruit more minority professionals.

| Table 8. Employees by Category and Minority Status, Fall 2003		
Full-Time Employees	Number	% Minority
Executive, Administration, Manager	50	30.0
Faculty	345	27.4
Professional	216	30.6
Secretarial-Clerical	238	43.3
Technical/Paraprofessional	171	39.8
Skilled Craft	46	32.6
Service Maintenance	78	50.0
Part-Time Faculty	1,049	24.0
Source: BCC Business Intelligence Services		

Overall Enrollment Trends

Both headcount and FTE enrollment are on an upward trend at BCC. There is an increasing trend toward full-time attendance over the past five years. It is typical that community college enrollments increase in the midst of an economic downturn. This may be the case here although this shift may also signal an increasing dependence on the College's programs by individuals with few other alternatives. In tandem with the increasing demand for College Prep classes, a critical mass of students has found the College's programs to be an attractive alternative to working and has made a deliberate decision to pursue postsecondary education on a full-time basis. This trend bears close monitoring since it carries implications for the way that courses are scheduled; full-time students will want to pursue as many program courses in close sequence as is feasible. Other recommendations for schedule-

Unduplicated Headcount and FTE Trends

Source: BCC Institutional Research

building options appear in subsequent sections. While overall enrollment appears healthy, projections based on current participation and County demographics suggest there is ample room for additional enrollments. There also is need to scrutinize other instructional data including degrees and certificates awarded and program enrollments to ensure that market needs are met.
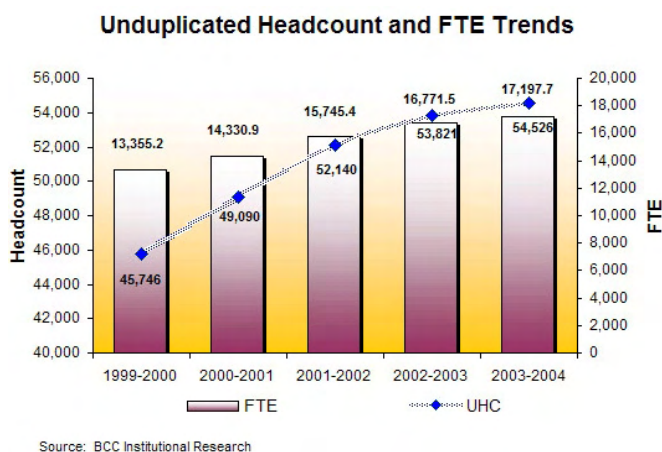
Degrees and Certificates Awarded

Appendix B displays degrees and certificates awarded by Broward Community College for the 2002-2003 year. Degrees are one valid measure of a program's health.

Other measures include rates of completion and placement in work and/or further education. Certainly, not every learner who enrolls in a program intends to complete a degree and these statistics undoubtedly reflect that phenomenon. However, program completion has grown to be an important performance measure in Florida and elsewhere, especially since students who complete associate degrees and certificates are more likely to move into higher-status management and professional positions with higher earnings. The American Association of Community Colleges reports that students who earn associate degrees average lifetime earnings of $250,000 more than people without degrees.

Appendix B should give pause when the College considers programming decisions. During the year that data were gathered more than a handful of programs produced no graduates. The College's program review process should be directed at low-degree and low-enrollment programs to determine whether it makes good sense for such programs to continue. Future decisions will require re-balancing resources which, in turn, will require even better data about enrollments as well as program outcomes. Again, it is unusual when degree options outnumber certificate options, especially if degrees are considered the focal point for a robust menu of certificates that are directly related to employment and as building blocks for degrees. This balance is a legacy of Broward's transfer program beginnings and should be addressed.

Program Vitality

Appendix C displays the growth and/or decline in fall course enrollment by prefix and CIP code from 1999 to 2003. Appendix D projects credit hours by prefix and CIP code for falls 2005, 2010, and 2015. Together, these two displays capture the history and estimate the future of programs at Broward Community College. Caution should be exercised in interpreting this information, however. The change statistics that accompany these data may be influenced by programs with small enrollment. That is, small enrollment variations in small programs can produce wide variations in calculated percentages.

The data in these appendices are grouped according to federal Classification of Instructional Program (CIP) codes. CIP is the accepted federal government statistical standard for classifying instructional programs that is in wide use. Instructional data using CIP codes allows Broward Community College to compare its enrollment, degree completion, and faculty use patterns with other institutions using this standard. CIP codes can also be cross-referenced to other taxonomies, including the Standard Occupational Classification (SOC) codes in use by the US Department of Labor and the state of Florida. Given the cautions above, the data in Appendix C are summarized below.
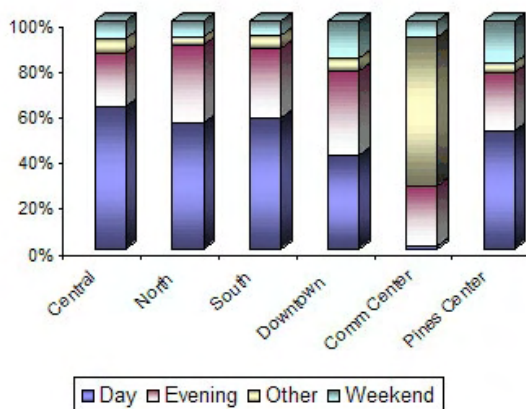
CIP areas exceeding college course enrollment growth since 1999

   Natural Resources and Conservation, 136.3%
   Computer and Information Sciences and Support Services,126.0%
   Education, 73.5%
   Engineering, 2050.0% (low enrollment area, drives up percentage)
   Family and Consumer Sciences/Human Sciences, 118.8%
   Biological and Biomedical Sciences , 39.2%
   Mathematics and Statistics, 34.9%
   Basic Skills, 38.4%
   Philosophy and Religious Studies, 38.8%
   Construction Trades, 55.1% (low enrollment area, drives up percentage)
   Health Professions and Related Clinical Sciences, 60.2%
   History, 37.7%

CIP Areas not keeping pace with college growth since 1999

   Agriculture, Agriculture Operations, and Related Sciences, -88.0%
   Communications, Journalism, and Related Programs, -30.8%
   Engineering Technologies, -45.7%
   Foreign Languages, -16.4%
   Legal Professions and Studies, -1.7%
   Multi/Interdisciplinary Studies, -29.5%
   Parks, Recreation, Leisure, and Fitness Studies, -19.7%
   Physical Sciences, -4.2%
   Mechanic and Repair Technologies/Technicians, -33.3% (low enrollment
   area, automotive technology, drives down percentage)
   Transportation and Materials Moving ,-45.0% (chiefly aviation programs)
   Business, Management, Marketing, and Related Support Services, -15.8%

Day, Evening, and Weekend Classes by Location, Fall 2003

Day ☐ Evening ☐ Other ☐ Weekend

BCC Technology-Enabled Course Enrollment, 2003-2004

On-Line, 5246, 32.9%

WebCT-Enhanced, 9009, 56.5%

Hybrid, 1704, 10.7%

Source: BCC Instructional Technology

Start Times, Fall 2003 Classes

Source: BCC Information Technology
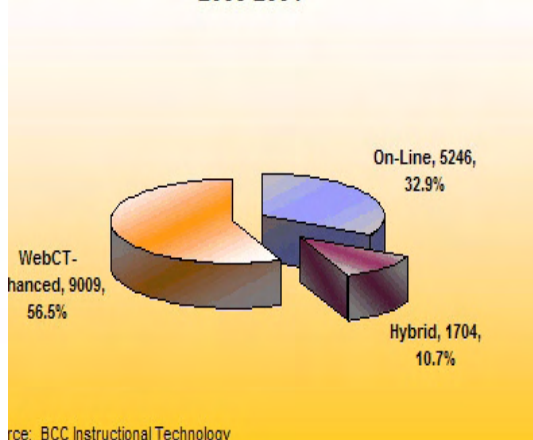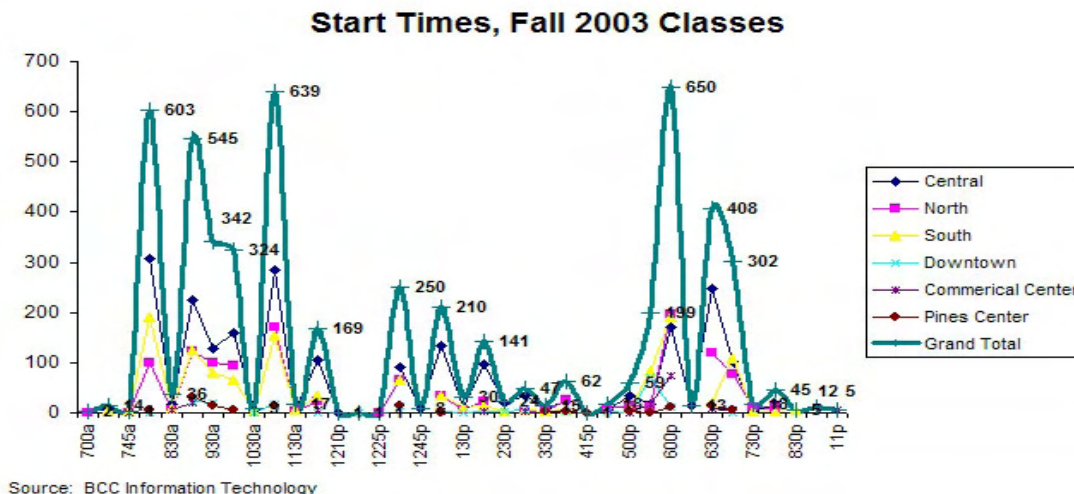
Scheduling of Courses. It is common across higher education institutions that courses are scheduled for peak times in the morning and again in the evening to accommodate working adults and other students for whom morning attendance is not possible. While this pattern is typical of most colleges, it does not maximize the capacity of the College during non-peak hours. Interviews with traditional-aged students as part of this Master Planning process indicated that they would be willing to take classes in the afternoon hours, especially if the classes scheduled were required for their major or to meet general education goals. All students expressed a desire for an expanded number of on-line courses. For older adult students, the attraction to on-line study seems to be a reasonable alternative to battling traffic to attend land-based classes. The format, scheduling, and delivery strategies for classes and programs need t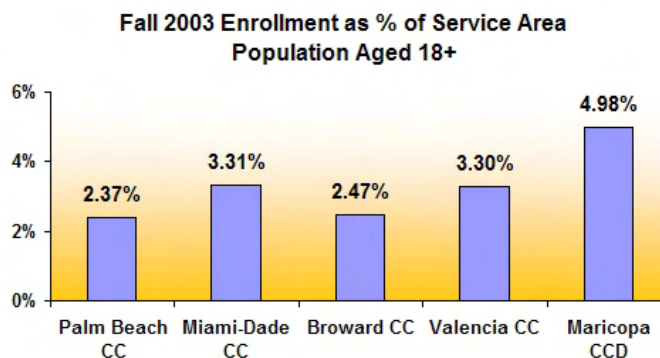o be refreshed. It is clear that old scheduling and delivery decisions will not meet growing needs. There is much instructional capacity for face-to-face instruction that now exists from noon through 6 p.m. and on weekends. The College recently has appointed a scheduling task force to deal with these issues.

Program health can also be traced to availability of classes at times other than the traditional daytime hours. Broward Community College offers about as many evening classes starting at 6:00 p.m. as it does morning classes that start between 9:00 a.m and 10:00 a.m. However, not all course prefixes are available in the evening, effectively limiting the access of adult learners to content that may be desirable. A snapshot of this phenomena for fall 2003 indicates these prefixes were not available after 6:00 p.m.: Automotive (AER), Aviation (ATF), Botany (BOT), Clinical Psychology (CLP), Comparative Politics (CPO), Dance (DAA) , Dental Assisting (DEA) , Dental Hygiene (DEH) , Dental Support (DES) , Electronic Engineering Technology (EST), Engineering Support (EGS), German (GER), Health/Leisure/Physical Education (HLP), History (HLP and EUH), Hospitality Management (HFT), Interdisciplinary Honors (IDH), Interior Design (IND), Jewish/Judaic Studies (JST), Journalism (JOU), Latin American History (LAH), Math-Geometry (MTG), Medical Assisting Technology (MEA), Medical Lab Tech (MLT), Military Science (MSL), Music (MUH, MVB, MVJ, MVP, MVW), Nuclear Medial Technology (NMT), Nursing (LPN), Office Computer Applications (OCA), Office Technology (OFT), Office Technology

Applications (OTA), Ophthalmic Technology (OPT), Pharmacology (APB), Physical Education (PEL, PEN, PEO), Radiation Technology (RAT), Radio and TV (RTV), Social Psychology (SOP), Soil Science (SOS), Spanish Literature (SPW), Surveying (SUR), and Technical Architecture (TAR

Participation Rates

Participation rates measure the immersion that a community college makes in its service area. While there are many ways to segment markets, the overriding statistic is the proportion of 18 year-olds and above residing in a college's service area that are also enrolled in respective institutions. The comparisons below indicate that BCC is not penetrating its overall markets at the same rate as other, similar community colleges. It should be remembered that BCC does not administer public adult vocational education in the County. A responsibility of the Broward County Public Schools, adult vocational enrollments in career and technical generate significant enrolment which, if added to BCC's total would increase its overall participation rate. The enrollment projections developed for this Education Master Plan and presented in a later section consist of four scenarios the College might pursue to increase its overall participation

Fall 2003 Enrollment as % of Service Area Population Aged 18+

Palm Beach CC	Miami-Dade CC	Broward CC	Valencia CC	Maricopa CCD
2.37%	3.31%	2.47%	3.30%	4.98%

PROJECTED NEEDS FOR COMMUNITY COLLEGE PROGRAMS

This section of the Broward Community College Education Master Plan focuses on the match between present and future programing at Broward Community College. Research from several sources is reviewed that highlights local, Florida, and national job markets. Labor market information is used as a framework to examine the current mix of programs, including which programs should be strengthened and those that appear not to meet student and labor market needs. Also included in this section are the results of a competitor analysis in which career and technical associate degree and certificate programs offered in a 60-mile radius of downtown Fort Lauderdale are identified, thereby providing a map of where BCC might find new program opportunities. This section concludes with analyses of the current and recommended state of instructional programs at the College.

Broward Community College should prepare individuals for jobs and careers that require skills that are in demand and which pay a reasonable wage. For example, the State of Florida's Workforce Innovation Agency defines "targeted occupations" as those jobs that pay an entry wage of $9.00/hour. High Skill/High Wage occupations carry entry wages of $10.47/hour. It is reasonable for BCC to use these criteria to approach decisions about its programs.

Broward Community College's position is unique among the nation's community colleges. It is a large organization, located in a thriving region, with a tradition of service. Large institutions are typically not nimble institutions, however, and the challenges ahead will require strategic actions. BCC will be challenged by continued population growth, shifting demographics and preferences for education, and increased competition for education and training opportunities. Potential consumers of higher education face a bewildering array of choices that simply were not available when BCC first opened its doors. Because of its size, South Florida attracts for-profit and non-profit career and technical providers. The College is capable of effectively meeting these challenges through the constant gathering of data about its internal and external environments and by acting on that intelligence. BCC's competitive advantages are learning content, low cost, and regional accreditation.

Competition will be keen. There are more than 60 land-based postsecondary institutions that award certificates and degrees within commuting distance of downtown Fort Lauderdale. Kaplan Learning Centers, for example, is set to add 96,948 square feet in Fort Lauderdale starting in January 2005. Almost all of these providers charge students more than does Broward Community College. They also offer programs ranging from short-term training of several weeks in duration to full degree programs. BCC's recent research indicates that adult students rank quality and convenience ahead of cost, a potential reason why consumers are willing to pay more for learning that is of short duration and/or convenience. BCC also competes with two major community college districts on its borders. Palm Beach Community College and Miami Dade College appear to meet many labor market needs with their existing programs. Palm

Beach Community College, in particular, is located nearer to high tech employers operating within its service area.

Competition for students also is heightened by the number of distance education, or e-learning, providers that have entered the educational marketplace in the last decade. A recent report placed the number of students in the United States participating in e-learning provided by both 4-year and 2-year institutions at more than three million.[12] The University of Phoenix for example is on their way to enrolling more than 100,000 online learners across the United States and the World. e-learning opportunities are not just offered by 4-year and 2-year institutions, however. Although precise figures are unavailable, numerous learning enterprises in the for-profit sector run parallel to traditional postsecondary providers, providing alternative routes to certification, especially in information technology. It is estimated that 1.2 million certifications are earned annually throughout the World. None of these certifications were earned through a traditional course of study or through a traditional institution of higher education.[13]

<div align="center">Statewide, Local, and National Labor Markets</div>

Broward Community College is located in Broward County. However, it also serves wider labor force needs in South Florida, statewide, nationally, and globally. As more jobs move from America's shores, it is critical that BCC prepare its graduates to compete in a global, knowledge-based economy. As the third fastest growing state, employment trends which are experienced nationally and globally also influence the Florida job market.

Statewide Trends

Florida is one of the few states growing rapidly and its economy weathered the post-9/11 decline in the travel industry well. Projections are that Florida will add more than 160,000 jobs through the year 2011, led by the services industry. Florida's position as a retirement and tourism destination will result in strong growth in the business services, health services, and eating and drinking sectors (Table 9).

With the exception of mining, statewide job growth is projected to be positive for all industries through 2011. Table 9 compares statewide industry growth to Broward County growth. In addition to negative growth in mining, Broward County is expected to experience negative growth in manufacturing. Many of the computer assembly manufacturing jobs formerly located in the County have been located offshore. A potential bright spot for manufacturing is the statewide interest in recruitment of

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[12] U.S. Department of Education, National Center for Education Statistics. Distance Education at Degree-Granting Postsecondary Institutions: 2000–2001, NCES 2003-017, by Tiffany Waits and Laurie Lewis. Project Officer: Bernard Greene. Washington, DC: 2003.

[13] Adelman, C. A Parallel Postsecondary Universe: the Certification System in Information Technology. U.S. Department of Educational Research and Improvement, 2003.

biotechnology and biopharmaceutical industries to Florida. The competition for these industries is very tight with many states competing for biotech companies and the high paying jobs they bring. The number of such jobs nationwide is expected to grow by nearly 30 percent over the next decade.

Table 9. Top 10 Florida Employment Sectors, 2011		
Sector	Jobs	Annual Growth
Business Services	1,134,242	3.69
Health Services	802,964	2.97
Local Government	783,756	1.90
Self-employed and Unpaid Family Workers	655,052	0.83
Eating and Drinking Places	560,436	1.73
Wholesale Trade, Total	446,057	1.96
Special Trade Contractors	337,395	2.34
Durable Goods Manufacturing, Total	305,749	0.54
Engineering and Management Services	296,260	3.35
Food Stores	291,867	1.66

Source: Florida Agency for Workforce Innovations

The past several years have been rocky for Florida's high tech sector. Because fewer jobs were lost in high tech than Massachusetts in 2002, it displaced that state for fourth place in high-tech employment among states. Nationwide, high tech employment has seen declines in manufacturing and high technology-related services totaling more 500,000 jobs.[14] Despite downturns in high technology, Florida maintains a critical mass of workers, ranking 3rd nationally in telecommunications services employment and 4th in engineering services, internet services, and communications equipment manufacturing. [3] Many of these jobs are located north of Broward County in the Florida High Tech Corridor, an area sweeping from Tampa through Orlando and Daytona Beach.

The state is now looking for ways to increase manufacturing. Florida's 14,000 mostly small- and medium-sized manufacturers employ 400,000 people with an average salary of $39,000, which is 21.5 percent higher than the state average.[15] However, the national picture for manufacturing is bleak with more than 2.7 million manufacturing jobs lost since the most recent recession. Florida policy makers recently have proposed eliminating the sales tax on research and development for manufacturers and exempting a threshold of $50,000 in equipment from state sales tax. Such incentives have become necessary because of brutal global pressures facing manufacturing in the United States,

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[14] AeA, "Cyberstates 2003" Accessed December 28, 2004 at http://www.aeanet.org

[15] National Association of Manufacturers, 2004. "Keeping America Competitive: How a Talent Shortage Threatens U. S. Manufacturing."

the impact that technology has had on this sector, and the forecast that the current generation of manufacturing workers will be retired in the next ten to twenty years. The result is a predicted shortage of 10 million skilled workers in the United States by the year 2020.[16]

Table 10. Annual Growth in Florida and Broward County Employment by Industry to 2011		
Industry	% Broward County	% Statewide
Agriculture, Forestry, and Fishing	2.62	1.25
Mining	-1.19	-1.09
Construction	1.78	2.00
Manufacturing	-0.89	0.32
Transportation, Communications, & Public Utilities	1.67	1.51
Wholesale and Retail Trade	1.56	1.68
Finance, Insurance, and Real Estate	1.32	1.76
Services	2.65	2.98
Government	1.49	1.46
Self-employed and Unpaid Family Workers	0.79	0.83
Source: Florida Agency for Workforce Innovation		

Broward County Employment Trends

In November 2004, Fort Lauderdale was ranked ninth nationwide in the annual survey of America's cities where jobs are created and sustained.[17] This report cites increasing trade between the U.S. and Latin America is generating job and wage growth in the area. Tourism, after terrorist attacks in 2001, is expanding and setting records. This translates to growth in hotels, eating establishments, car rentals, arts facilities, and services in general. Port Everglades is also an economic engine as a host to both cruise lines and international shipping. A computerized container facility, the port is ranked 12th busiest in the United States.[18] Fort Lauderdale-Hollywood International Airport is one of few large hub U.S. airports to experience positive growth in passenger traffic and seat availability since 9/11. In 2003, nearly 18 million passengers passed through this facility.[19]

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[16] Eisen, P. Today's Manufacturing Layoffs Mask a Looming Shortage of Skilled Workers in the U. S. National Association of Manufacturers, 2003.

[17] Milken Institute, "Best Performing Cities: Where America's Jobs are Created and Sustained," 2004

[18] "Port Everglades sets cargo record." South Florida Business Journal, September 29, 2004

[19] Broward County Office of Urban Planning and Redevelopment, Planning Services Division, State of the Broward Economy.

Table 11 forecasts the top 20 growth jobs in Broward County through the year 2011. The entire list of 100 growth jobs appear in Appendix E. It is noteworthy that among the top 20 occupations listed in Table 11, only two require a 4-year degree or higher. A significant number of these jobs require only "on the job training" or OJT. While it is usual that employers offer OJT, it also is possible for BCC to efficiently assist employers with training employees through noncredit or credit classes that have been customized to fit employer needs. Jobs displayed in Table 11 and again in Appendix E that generate wages of less than $9.00/hour are not good candidates for program creation by the College since they do not generate a living wage.

The largest employer in the County is the Broward Public School District which anticipates hiring more than double the number of teaching positions indicated by Appendix E. Interviews with school officials indicate that a target of 2,000 teachers annually is realistic to meet the new state Constitutional amendment (Article IX, Section 1) that establishes lower K through 12 class sizes, new demand, and to fill those positions lost to turnover. As is the case nationally and regionally, the health care field dominates the list of high wage/high skill occupations.

Table 11. 20 Fastest Growing Jobs in Broward County to 2011			
Title	Annual Openings	2003 Average Wage/Hr.	Training Required
Food Preparation & Serving Workers, Including Fast Food	1,458	$7.05	Short-Term OJT
Retail Salespersons	1,396	$10.99	Short-Term OJT
Cashiers	1,309	$8.05	Short-Term OJT
Waiters and Waitresses	976	$7.78	Short-Term OJT
Registered Nurses	720	$23.72	Associate
Customer Service Representatives	646	$12.84	Moderate OJT
Stock Clerks and Order Fillers	576	$9.69	Short-Term OJT
Office Clerks, General	558	$10.42	Short-Term OJT
Janitors and Cleaners, Except Maids and Housekeeping	496	$8.79	Short-Term OJT
Elementary School Teachers, Except Special Education	487	$24.26	Bachelors
Laborers and Freight, Stock, and Material Movers, Hand	452	$9.39	Short-Term OJT
Sales Reps., Wholesale and Manufacturing, Other	433	$27.55	Moderate OJT
Landscaping and Groundskeeping Workers	429	$10.17	Short-Term OJT
Nursing Aides, Orderlies, and Attendants	355	$9.41	Short-Term OJT
First-Line Supervisors of Retail Sales Workers	346	$19.46	Work Exp-Rel Occ
Executive Secretaries and Administrative Assistants	343	$17.65	Moderate OJT
General and Operations Managers	331	$43.92	Bachelors +
Bookkeeping, Accounting, and Auditing Clerks	330	$14.13	Moderate OJT
Security Guards	309	$9.65	Short-Term OJT
Licensed Practical and Licensed Vocational Nurses	306	$16.62	PS Voc Award
Source: Florida Agency for Workforce Innovations Agency			

National Trends

The U.S. Bureau of Labor Statistics tracks information on individual occupations and on entire industries. The most recent statistics are for ten years, from 2002 to 2012 (Table 12) and predict that the fastest growing occupations will largely be in health-related areas. Much of this demand occurs as the general population ages and as current health professionals retire. Also in national demand are skills in networking, data communications, and software engineering. What is most striking about this list is the absence of manufacturing jobs and the corresponding rise in service occupations.

The national downturn in high tech manufacturing over the past five years is traceable to the emergence of countries that have increased their capabilities in all phases of producing goods from raw materials. Most *primary* high tech manufacturing jobs including computer and peripheral equipment, semiconductor and electronic components, communications equipment, and software and data processing have been outsourced.

Table 12. Fastest Growing U.S. Occupations to 2012		
Occupation	% Growth	Primary Training
Medical assistants	59	Moderate-term on-the-job training
Network systems and data communications analysts	57	Bachelor's degree
Physician assistants	49	Bachelor's degree
Social and human service assistants	49	Moderate-term on-the-job training
Home health aides	48	Short-term on-the-job training
Medical records and health information technicians	47	Associate degree
Computer software engineers, applications	46	Bachelor's degree
Physical therapist aides	46	Short-term on-the-job training
Physical therapist assistants	45	Associate degree
Computer software engineers, systems software	45	Bachelor's degree
Veterinary technologists and technicians	44	Associate degree
Database administrators	44	Bachelor's degree
Fitness trainers and aerobics instructors	44	Postsecondary vocational award
Dental hygienists	43	Associate degree
Hazardous materials removal workers	43	Moderate-term on-the-job training
Occupational therapist aides	43	Short-term on-the-job training
Dental assistants	42	Moderate-term on-the-job training
Personal and home care aides	40	Short-term on-the-job training
Self-enrichment education teachers	40	Work experience in a related occupation
Occupational therapist assistants	39	Associate degree
Computer systems analysts	39	Bachelor's degree
Environmental engineers	38	Bachelor's degree
Postsecondary teachers	38	Doctoral degree
Environmental science and protection technicians, including health	37	Associate degree
Network and computer systems administrators	37	Bachelor's degree
Computer and information systems managers	36	Bachelor's or higher degree, plus work experience

Table 12. Fastest Growing U.S. Occupations to 2012		
Occupation	**% Growth**	**Primary Training**
Preschool teachers, except special education	36	Postsecondary vocational award
Respiratory therapists	35	Associate degree
Occupational therapists	35	Bachelor's degree
Physical therapists	35	Master's degree
Source: U.S. Department of Labor, Bureau of Labor Statistics, Employment Projections. Retrieved April 27, 2004 from ftp://ftp.bls.gov/pub/special.requests/ed/ind-occ.matrix/mlrtab4.txt		

Those primary manufacturing jobs recently lost to overseas factories will not return to the United States. The future of manufacturing is linked to *embedded* technology.   Embedded technology represents the integration of technology within products and represents the next wave of high technology employment. Embedded high technology jobs, requiring a deeper employee skill set than primary manufacturing, represents the next wave of manufacturing employment.

Hot Community College Programs

The American Association of Community Colleges (AACC) recently surveyed community college administrators across the United States to determine hot programs. Hot programs (Table 13) are defined as programs for which there is a large market demand for graduating students. Those results are summarized below. Not surprisingly, allied health programs were the most frequently identified hot programs. Broward Community College already offers those found on this list. In contrast, BCC does not offer three programs (at least programs represented by a readily-identifiable sequence of courses leading to a formal award) that appear on the AACC list, including cybersecurity, homeland security, and mortuary science. The appearance of manufacturing as a hot career for reasons noted above may be applicable to other regions of the United States but remains problematic for BCC.

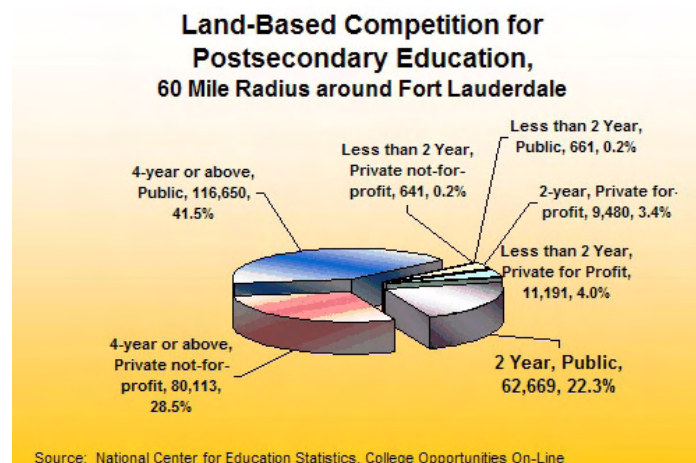| Table 13. Hot Community College Programs, Credit and Noncredit			
Rank	**Program**	**Entry Salary**	**Maximum Salary**
1	Computer Programming	$48,500	$65,000
2	Manufacturing	$40,178	$65,000
3	Cardiovascular Technology	$40,000	$40,000
4	Homeland Security	$40,000	$45,000
5	Cybersecuirty	$38,625	$50,000
6	Engineering	$38,451	$55,000
7	Registered Nursing	$38,419	$72,000
8	Real Estate	$38,093	$60,000
9	Occupational Therapy	$38,000	$38,000
10	Mortuary Science	$36,666	$45,000
Source: American Association of Community Colleges, Hot Programs at Community Colleges, 2004			

Career and Technical Program Competitor Analysis

There are approximately 29,000 students enrolled in non-profit and for-profit institutions located within a 60-mile land radius of BCC's downtown campus. These competitors are smaller, more tightly focused on one or more programs, and more expensive for students (Table 14). This increased expense is often reflected in a loan burden that can be paralyzing to former students of proprietary institutions.

The analysis below is limited to those competitors with a physical presence in the area since it is not possible to determine the numbers of out-of-area institutions that provide e-learning. Programs that are offered by only one or a few institutions represent opportunities for the College. With the exception of two other public community colleges (Palm Beach and Miami-Dade), BCC's competitors offer programs that are substantially more expensive to students. Institutions offering the largest number of programs include ATI Career Technical Institute, Florida National College, Keiser College, and the IBM SER Institute in Miami. A full listing of these institutions and programs they offer is contained in Appendix F.

Table 14. BCC and Competitor Non-Profit and For-Profit Career and Technical Institutions		
	BCC	Average at Competitors
Number of Career and Technical Programs	67	11
12-month Unduplicated Headcount	47,761	1,829
Full-Time Students	14,328	268
Part-Time Students	33,433	51
Reported Full-Time Tuition (In-State) Year	$1,404	12,064
Associate Degrees Awarded, 2002-2003	2867	354
Certificates Awarded, 2002-2003	677	386
Percent of Full-Time Students Receiving Financial Aid	54	82
Percent of Full-Time Students with Loans	12	63
Average Loan	$ 2,718	$5,239
Source: National Center for Education Statistics and BCC Business Enterprise Intelligence.		

Competition arises not just from those career and technical educational providers found in Appendix F, but also from 4-year institutions in both the for-profit and non-profit sectors and from electronic competitors. The "deregulation" of higher education in Florida in which there is no statewide oversight for new program development will accelerate competition between the 2-year and 4-year sectors. Fortunately, BCC enjoys strong partnerships with area private and public universities and these relationships can be synergistic, rather than competitive, especially if they are built on 2+2, or even 3+1, articulation agreements. During the master planning process, top administrators from

Land-Based Competition for Postsecondary Education, 60 Mile Radius around Fort Lauderdale

Source: National Center for Education Statistics, College Opportunities On-Line

Florida Atlantic University, Florida International University, and Nova Southeastern University expressed appreciation for their current partnerships with BCC. Nova Southeastern was particularly interested in partnership programs in the health area while Florida International University was focused on engineering and education partnerships. BCC already enjoys several partnerships with each of these institutions and continued effort to enhance existing articulation agreements while looking for new opportunities can provide all partners with a competitive edge.

The Need for Instructional Programs

Labor market projections combined with the competitor analysis form a picture of productive instructional programs that the College will either want to strengthen or develop as new programs. The broad areas below represent a starting place.

International Business and Hopsitality

Many competitor institutions offer programs in accounting and business administration or management. The picture is less clear in this area after these two broad program areas. Given Broward County's prominence as a tourist destination, shipping port, and international destination, it is of note that there are few programs in a 60-mile radius that address these key industries. While there are five programs in hospitality management in the region, there appears to be only one program that directly addresses tourism and one program in resort management. There are three programs in international business, far less than is suggested by the number of immigrants in South Florida and burgeoning trade with international businesses. No programs address importing and exporting. Similarly, the presence of booming business at Port Everglades strongly suggests the need for programs in transportation management, logistics, and material management. Customer assistance technology is also a program that fits increasing retail needs in South Florida, but for which there are only two programs.

Foreign Languages

There is little competition in the area of foreign languages among postsecondary competitors. The three public community colleges in South Florida serve the entire market. It is clear that South Florida's volume of trade with Latin and Central America and the Caribbean make French and Spanish acquisition increasingly important. There currently is but one program in translation/interpretation within a 60-mile radius, suggestive of another market opportunity for BCC. English as a Second Language enrollments are increasing dramatically at the College while enrollments in college-level foreign languages is decreasing.

High Tech Programs

What role should Broward Community College play in preparing a high tech workforce? First, analysis of degree completion data (Appendix B) indicates that many high tech areas do not produce more than a handful of graduates. Further, Palm Beach Community College is in closer proximity to more high tech firms than is Broward Community College. Even so, Broward Community College should continue to pursue a niche for training high tech workers even given these constraints. The relative lack of high tech employment may indeed change as the College comes to be viewed as the hub of workforce development for Broward County. Employers moving to the County will want a trained workforce and the College should consider what types of skill competencies that high tech companies will require as a an entry point and build a certificate program around that core set of skills. The curriculum for that certificate would necessarily integrate computer skills, communication and customer relation skills, basic skills and work ethics alongside math, science, and critical thinking skills.

Broward Community College also has a role to play in increasing the number of secondary students who might pursue technologically-related careers. Creating awareness of high technology programs through "hands on" application of technology will pay dividends. The College could also replicate this success through Tech Prep programs, dual enrollment programs, and through embedding these opportunities elsewhere. It is desirable to improve the transition and college-going rates of Broward County secondary students into college career and technical programs and subsequent careers.

Biotechnology. Florida, in common with many states, is seeking to recruit and grow biotechnology companies. The Scripps Research Institute plans to build its East Campus, a biotech research facility in Palm Beach County, providing the college opportunity to train laboratory technicians, engineering technicians, and management support occupations. Broward Community College currently is participating in a joint effort to develop biotechnology engineering curriculum in conjunction with Indian River Community College (Fort Pierce), Brevard Community College (Coca), and Palm Beach Community College.

A national trend is for biotechnology companies is to recruit candidates with a bachelor's or higher degree higher in the sciences for technical positions when supply for potential technicians outruns demand. At the same time, approximately 10 technicians are needed to support every engineer. BCC will want to ensure that employers large and small understand this dynamic as well as the specific competencies that its graduates possess. The Biomedical Engineering Technology program is designed to prepare students to install, calibrate, maintain, and repair biomedical equipment and instruments used in hospitals, physicians' offices, medical laboratories, and emergency vehicles. Technicians are also directly involved in training physicians, nurses, and laboratory workers on how to use the equipment. BCC produced four graduates in 2002-2003 an output which should grow if the program is positioned to meet employment demand.

Computer technologies. This area includes computer-related courses and certifications. Six schools or more offer competing programs in computer networking and/or administration, general computer science, and multimedia design and web technology. Additionally, there are at least seven institutions offering one or more programs leading to industry certifications (e.g., A+, Oracle, and Microsoft). Of opportunity to BCC are those certification programs listed that are offered by only one competitor but for which the College should secure an industry partner. An emerging program not found in a 60-mile radius is recording arts technology.

Engineering Technologies. Competition exists in computer-assisted design and electrical technology programs. In contrast, there is little competition in global information science and civil engineering technology. Broward has no current competition in either mechanical engineering technology nor nuclear engineering technology. Strong interest exists from 4-year engineering programs, especially from Florida International University, in serving BCC transfer students.

Manufacturing Technologies. As noted above, the availability of production manufacturing jobs will be rocky for the foreseeable future. Nonetheless, the College should also pursue the development of 2 +2 programs with the public university system in high tech areas. The continued development of these industries in Florida will be dependent on the quality of university-based research. At the same time, companies will need qualified technicians to put that research into practice. Articulation agreements that recognize the specific hands-on curriculum available at community colleges and tie that knowledge with the research-based curriculum available at the university level will be increasingly important to the state's efforts.

Health Programs

The demand for health care workers is accelerating and Broward Community College will need to expand its programming to match documented need. There are many medical facilities in South Florida and more are planned to meet population expansion. In many important ways BCC appears to be answering the call for graduates although it may not, by itself, meet all demand. It is desirable to look at other health program needs as well.

Nursing. Strong demand for registered nurses will continue for the foreseeable future, especially as the population ages and as qualified nurses move out of the profession. According to the American Association of Community Colleges, nursing programs enrollments nationwide are stunted due to a lack of qualified faculty, clinical, classroom and lab space, and clinical faculty.[20] Broward Community College certainly experiences these obstacles although its strong partnerships with area hospitals and health organizations help. The College reports that more than 3,500 potential nursing students are on the program's wait list.

BCC administrators express concern that the retention rate within the nursing program is low and that Registered Nurse graduates' performance on the National Council Licensure Examination for Registered Nurses (NCLEX-RN) does not compare favorably with other community college nursing programs. The first-time pass rate for BCC's 2003-2004 associate degree nurses was 81.5 percent compared with the Florida average of 83.3 percent. While this rate is higher than other South Florida community colleges (Miami-Dade, 74.8% and Palm Beach Community College, 62.7%), it lags other peer institutions (Valencia Community College, 90.5% and Tallahassee Community College, 82.2%). BCC's pass rate is also behind the national average of 86.5 percent.[21] In response, the College should take a considered look at its admissions requirements for nursing and set them to correlate with success in the program and employment.

Other health program potentials. BCC faces competition in the health services area including several specialized schools devoted to single occupations. In particular, basic X-Ray technology, emergency medical services, health services administration, massage therapy, medical assisting, medical coding specialist, nursing, patient care assisting, pharmacy technician, sonography, and surgical technology are offered by 6 or more institutions. In contrast, there is a lack of programs in home health aide, dietetic technology, physician assisting, and veterinary technology. Given the aging of Broward County's population, BCC also should consider assisted living administration. There is one program in assisted living within the 60 miles of Fort Lauderdale. Given the aging nature of Florida's population, this may be a productive market opportunity. While aging demographics clearly creates a need for health care associated with aging, an increasing interest in healthy lifestyles and nutrition may drive a need for dietetic technology. A standard recommendation for new programs appearing throughout this report, especially for high cost programs, is to engage the support of industry partners.

Existing Programs to Strengthen

Analyses of labor market projections, competition, and enrollment trends leads to conclusions about which programs the college already operates that ought to be

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[20] American Association of Community Colleges. AACC Nursing Survey, Spring 2003. Retrieved May 1, 2004 from http://www.aacc.nche.edu/Content/NavigationMenu/HotIssues/Nursing/Final_Results.pdf

[21] Pass rate data taken from the Florida Board of Nursing, "NCLEX Passing Rates by School, Registered Nursing." Accessed January 3, 2005 at http://www.doh.state.fl.us/mqa/nursing/NCLEX_2003_%202004.pdf

strengthened. This strengthening can be accomplished in joint efforts by program faculty and instructional administrators to pursue curricular enhancements based on competencies, alterations to class scheduling, creation of classes that more closely meet labor market demands, and in hiring qualified part-time faculty to add additional classes in new locations. Increased enrollment in classes will grow programs by providing additional resources to the College.

Table 15. Programs to Strengthen		
Program	**Rationale**	**Desired Outcome**
Automotive Service Technicians	238 annual openings in Broward County. Increased technological requirements and need of rental care market in South Florida.	Partnership with major automotive manufacturer. Increase graduates to meet labor market needs.
Business, especially International Business	South Florida's connection to Caribbean and Latin America markets and tourism.	Programs that support existing and emerging business.
Computer Support Specialists	105 annual openings in Broward County. Growth nationally.	Increased access to industry certification options.
Dental Hygiene and Assisting	109 annual openings in Broward County for dental assistants. 2 existing programs in area for hygiene.	BCC graduated 17 hygienists in 2002-03. More are necessary to meet labor demand.
Dietetics	Increased emphasis on health lifestyles requires nutritional consultation	Candidate for e-Learning development
Education 2 + 2 Programs	School district is largest single employer. Predicted need of 2,000 students annually.	Strengthen transfer agreements while refining alternative certification efforts.
Fitness Technicians	Modest openings, but linked to lifestyle. 2 competitor programs.	Integrate within BCC's own menu of services to community.
Food Preparation Management	Fast growing field in Broward County and nationally. Fits with tourism demand in South Florida.	Train persons to assume management positions. High paying jobs, $19/hr.
Health Information Technology	Emerging area tied to reduction in overall health costs. 2 competitor programs.	47 percent national growth by 2012. Increase number of graduates to meet growth trends.
Hospitality Management/Tourism Management	Fort Lauderdale is a major tourist destination. Port Everglades is a major tourist disembarkment point.	Identify partners in industry to expand internships and to increase the number of graduates in field tied to economic health of region.
Medical Assistant	Local competition for training is large although there remains 59 percent national growth to 2012. 182 annual openings in Broward County.	Increase the number of graduates to meet local labor market needs.
Nursing Assistant	355 annual openings in Broward County.	Tie program closely to nursing program to provide alternative route to professional standing for those not prepared to be nurses.

Table 15. Programs to Strengthen		
Program	**Rationale**	**Desired Outcome**
Pharmacy Technician	74 annual openings in Broward County, but 6 competitor training organizations.	Look for niche. Program is candidate for eLearning development
Registered Nursing/Practical Nursing	720 annual openings in Broward County	Increase entrance requirements to match success in curricula and employment
Tourism and Hospitality Management	Growth area in South Florida. Number of BCC graduates is modest.	Draw industry connections tighter to BCC curricula
Technical Theater	Emerging arts market tied to tourism and lifestyle.	Increase in partnerships leading to direct employment for students.

Potential New Programs

Developing new programs is neither easy nor inexpensive. High costs programs should only be developed in conjunction with business, industry, or public sector partners. It is clear, however, that the Current program mix will need to move toward programs that are predicted to be in demand both nationally and within Florida. Several of the recommended programs can be built from existing programs and by combining faculty expertise. There are also programs that would be new endeavors for the College and ought to be pursued most logically when there are, or slightly ahead of, strong partnerships, especially in the medical field. All of these suggestions require further development and should be used only as a starting point in a rational process of program development.

Table 16. Potential New Programs		
Program	**Rationale**	**Cost**
Assisted Living Administrator	An aging Baby Boom population eventually will require more assisted living.	Medium
Construction Supervisors	Growth area in Broward County and statewide. Expand partnership with public vo-techs.	Medium
Customer Assistance Technology	1,396 annual openings in retail sales in Broward County	Medium
Cybersecurity	Growth area given national security issues. Volume of sensitive data is growing rapidly and database security is a priority for many businesses.	Medium/High

Table 16. Potential New Programs		
Program	**Rationale**	**Cost**
Electricians	148 new jobs created in Broward County annually. Support for construction industry. Expand partnership with vo-techs	Medium/High
Entrepreneurship	Creates new jobs by identifying new business opportunities. No existing career and technical competitors.	Medium
Global Information Systems/Geomatics	Number of professionals using GIS a part of their job approaches 1,000,000 worldwide. Numbers are growing 15 percent annually	Medium
Home Health Aide	175 annual openings in Broward County	Medium (tied to existing nursing program)
Homeland Security	Current emphasis in criminal justice program, but deserves higher visibility	Medium (tied to existing criminal justice program)
Import/Export Specialist	Rising trade with Caribbean and Latin America requires specific knowledge and language ability.	Medium
Logistics/Transportation Management	Port Everglades is ranked 12th busiest shipping port in the United States. No BCC programs respond directly to this.	Medium
Mortuary Science	Emerging interest in community colleges. No competitor training organizations in South Florida	Medium
Occupational Therapy Assisting	39 percent growth forecast nationally until 2012. Few competitor programs.	High. (Medium if tied to existing health programs)
Retail Management, especially Rental Car Management	Growth area nationally and in South Florida. Rental car management is fast growing segment.	Medium
Security and Fire Alarm Systems Installers	Fast growing occupation requiring less than an Associate's degree. Meets construction industry needs	Medium
Small Business Management	Emerging program tied to trend to work nearer home, especially in congested traffic areas. Support for entrepreneurship program.	Medium
Teacher Assistants (paraprofessionals)	95 annual openings in Broward County. Teaching Assistants must meet federal No Child Left Behind requirements	Medium

Table 16. Potential New Programs		
Program	**Rationale**	**Cost**
Translation/Interpreting, especially English/Spanish, Creole/English	Multilingual characteristics of Broward County and South Florida. Meets business and cultural needs.	Medium. Pair with existing foreign language programs and noncredit menu.
Veterinary Technologists and Technicians	44 percent national growth to 2012. Only one program in South Florida.	High. Requires industry support.

<u>Other Initiatives</u>

This section of the Education Master Plan examines broad initiatives that Broward Community College should pursue throughout the planning period. These initiatives should operate at a macro level since they do not fall exclusively in the domain of one, or even a handful of, instructional programs. Successful pursuit of these initiatives will shape the total College over the planning period and will effect individual instructional programs.

<u>Pre K through 16 Linkages</u>

Closing the participation gap especially for low-income and minority learners is a Broward County problem, a state of Florida problem, and a national problem. The dimensions of this problem cannot be described by standardized test scores alone. It is well-known that aggregate test scores appear to be heavily influenced by demographics and by the percent of students defined as "poor" by the federal government. The problem is best described by the wasted human potential that arises when individuals do not complete each level of education along the route to higher education.

Because students are particularly vulnerable to dropping out at transition points, especially during the first year of college, the needs of high school students must be addressed with seamless curricula and support services that help students transition into college and career. Certainly, any activities that cause or strengthen collaborative relationships between and among families, middle schools, high schools, postsecondary institutions and business/industry should be pursued with vigor.

The College currently operates dual enrollment programs in conjunction with secondary schools in the County as well as the College Academy @ BCC. The latter is an early/middle college model. The number of early/middle college models is increasing throughout the nation where they have begun to produce great success for secondary students, especially low-income and minority secondary students. This model creates a five-year, seamless, accelerated program for secondary students to complete a college associate degree concurrently with a high school diploma. This model makes college affordable to disadvantaged students by combining funding sources, reducing repetition in the curriculum, and eliminating the need for remediation at the college level. To award two degrees in five year's time means that the early/middle college model

would be much more than simply offering one or two courses at secondary schools under a "dual enrollment model." It means, instead, refashioning the education process to provide a total multifaceted, multi-leveled education experiences for secondary students.

BCC's current early/middle college efforts should be expanded to include students for whom higher education is not an automatic choice. Thought should be given to expanding the program directly to secondary schools with large concentrations of low-income and minority students in greater partnership with the Broward County Public Schools (BCPS). The current funding model provides that the College receives state support for the instruction it offers but does not collect tuition from the district. Instead, BCPS pays for instructor salaries. This financing arrangement will need to be revisited in order to expand the number of early/middle colleges throughout the County.

The College and the BCPS, in conjunction with the League for Innovation, have recently launched a "bridge" program in which the skills of students in the 10th grade are assessed using the College Placement Test. This program seeks to help sophomores understand what skills they may need to build in their final years of secondary schools to successfully enter a college curriculum. This effort will help students and their parents recognize and span the considerable gap between success on the Florida Comprehensive Assessment Test (FCAT) required to complete high school and the competencies required to enter "regular" college curricula. BCC estimates that just 11 percent of 10th graders sampled as part of its Bridge initiative were able to pass all parts of the CPT test.

College Preparatory Program

The College now estimates that more than 80 percent of its new students require remedial classes. More alarming is the finding that only about five (5) percent of College Prep students eventually complete an Associate's degree. The success of these learners--many of whom are minority, first-generation, and/or low-income students--will determine the long-term viability of the College's transfer and career and technical programs. These programs cannot succeed unless students are moved through required College Prep sequences in an expeditious, yet quality manner. Broward Community College recently was selected as one of 27 colleges participating in the national, Lumina-funded Achieving the Dream project. Selection for this groundbreaking effort coupled with BCC's commitment to place the success of College Prep students at the front of its agenda spell a new direction for BCC.

There will be pressing need to provide ESL, GED, and remedial math, reading, and English courses in Broward County throughout the planning period. BCC produces the 2nd highest credit hours in College Prep among Florida's community colleges, following only Miami-Dade College, and this is unlikely to change. There is little organized competition outside the public sector for programs that prepare learners for success in the college classroom. No identified programs were located in for-profit and non-profit providers. This should come as no surprise, given the costly nature of these programs and the tendency for proprietary schools to "embed" remedial education within their instructional programs.

The College is currently studying the alignment of credit hours within College Prep Courses. Simultaneously, it also is examining the range of its education competencies. In College Prep, decisions are now being made about where a 4th credit hour might be deployed to bolster success, making the present an especially critical time to look at competencies within College Prep, pre-College Prep competencies, and the bridge between College Prep competencies and competencies in college-level classes. Earlier in this report, the gap between the FCAT and CPT assessments was identified as gap with negative consequences for secondary students seeking access to higher education. Identification and articulation of competencies that these assessments share and those that are distinct would be starting place to make education seamless for students. In a similar vein, formative research that is ongoing through the College's Achieving the Dream process will identify what types of support, including supplemental instruction, may be required to ensure student success throughout the sequence of College Prep courses. At the top of that sequence, it would be well to identify competencies that are necessary for the "regular" curriculum so that students understand, unequivocally, where their skills match those required for success.

Several actions are suggested. First, in addition to articulation of competencies it is critical that clearly specified goals be developed for programs and courses. These goals should be communicated to students, future students, and to all stakeholders. Policymakers need to understand what College Prep education is, why it is critical, and what outcomes it produces. Faculty and staff need to see how it connects to their efforts at the College. Second, the College also has embarked on the establishment of Learning Communities, in which cohorts of students take a sequence of the same classes, and these have been shown to be successful as well as scalable. The scheduling of students into College Prep sequences should provide for the quick establishment of Learning Communities as routine business. Third, all faculty and staff should be specifically trained in the techniques, models, and methods appropriate to the College Prep population. While this training would be most intense for those professionals working directly in the College Prep program, including part-time faculty, it also should encompass all faculty and staff because of the critical nature of this work to success for the entire institution. Finally, the College will face decisions about whether to centralize College Prep as a separate instructional division so as to provide a larger identity for this mission critical effort. At this juncture in the College's history it makes more sense to integrate this work in and with as many disciplines and programs as is possible without assigning a single entity responsibility for overall success. To be successful, College Prep must be embedded across the College. This does not mean that the College Prep program could not benefit from increased coordination and visibility. Rather, that it is critical that successful outcomes for all students are everyone's business.

A noncredit role. Nearly one-third of the County's population was born outside the United States and nearly one-third of the County's families speak a language other than English at home. In the same way that English only speakers should acquire proficiency in Spanish and/or French, it is clear that English language literacy is related to economic self-sufficiency. Those who are literate only in a language other than English are more likely to have non-continuous employment and to earn less than those

literate in English.[22]   Barriers such as time, transportation, and childcare may keep many from attending classes. Since many workers and homebound persons will find it difficult to attend credit classes during the day, the College should consider delivering English language instruction in noncredit formats and in closer conjunction with Community Based Organizations that already are providing this service. The goal is to lessen barriers that non-English citizens face when they wish to continue their pursuit of a degree or certificate at BCC. For other County citizens who already have degrees from non-US institutions, cooperative efforts to provide noncredit instruction can speed their entry into the job market.

English literacy is usually the first component of Workplace Literacy. That is, workers must be able to communicate in English while moving on to master more complex work-related skills. Workplace Literacy skills include mathematical computation, reading, and critical thinking. Employees can acquire these skills simultaneously with English fundamentals. In fact, providing English as a second language (ESL) classes on the job for those who have problems accessing programs outside of work has been shown to be very productive in other settings. Learning in the context of work can simultaneously improve work skills while improving language skills to elevate Workplace Literacy.

eLearning

More than 95 percent of the courses offered at BCC are delivered face to face in the classroom. Throughout the Master Planning process there was considerable interest expressed by faculty, staff, and students in expanding the number of non-traditional delivery course offerings to meet the needs of current and potential learners. This mix would include online and hybrid (blended) courses. Hybrid courses mix technological delivery with traditional face-to-face instruction. The expansion of these learning opportunities will directly influence the future of the College, providing it with much more flexibility that it currently has in providing learning options, and plans for facility expansion. While eLearning is not a total solution to the looming capacity issues faced by the College, it will have much to say about the complexion of the institution's learning menu which, in turn, will impact the types of learning environments that are required to meet educational needs. eLearning also has transformative value as a platform from which a striving institution can evaluate the effectiveness of its all curricula and to engage its faculty in new teaching paradigms.

In fundamental ways, BCC is poised to meet the eLearning challenge.   After what might fairly be called a slow start, compared to other community colleges that made an early entry into eLearning, good progress has been made over the past three years in faculty and staff development efforts necessary to ensure a quality product. Significant accomplishments include creation of nursing curriculum that is competency-based within learning objects. These learning objects are transportable units of learning that can be

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[22] Greenberg, E., Macías, R. F., Rhodes, D., & Chan, T. (2001). English literacy and language minorities in the United States (Statistical Analysis Report No. NCES 2001464). Washington, DC: National Center for Educational Statistics.

used creatively to redesign courses and to build learning options for students. This, along with clear interest in expanding learning options for students, has formed a critical mass for BCC that can propel BCC quickly ahead.

At the same time, competition for on-line community college students is sharp. e-Learning knows no boundaries and there are many competitors, especially at the lower division (100 and 200 courses) level. Rio Salado College in the Maricopa Community College District enrolled more than 38,000 headcount credit students in 2002-2003 and more than 16,000 noncredit students. Rio Salado is the now the sixth fastest-growing public two-year college in the nation and enrolls students in nearly all 50 states and on six continents. A community college consortium in Colorado, CCCOnline, annually enrolls more than 20,000 students. Broward Community College cannot hope to match these enrollments in the near-term and probably nor is it desirable to try to replicate the range of offerings now offered. However, BCC clearly needs to expand its menu of on-line and hybrid classes. The latter refers to courses that are offered partially on the Internet and partially through face-to-face interaction. This might also assist in overcoming a recurring complaint that students are not being challenged enough in community colleges and diminish concerns about providing courses that are totally on-line and without meaningful faculty interaction. Solving the issue of providing fully accessible education may also mean placing one or more unique degree programs on the web. BCC lags other community colleges in placing degree programs on the web.

e-Learning also has the potential to improve teacher training, including the ongoing work between Broward County Public Schools and BCC to providing avenues for alternative certification. The connections between technology and learning have never been more important with an estimated 95 percent of public schools wired to the Internet. While public school teachers have more resources at their disposal than ever before, many have not received sufficient training in effective uses of that technology. BCC could play a major role in providing that training either face-to-face or through on-line delivery.

e-Learning also will mean better opportunities for BCC students to access on-line content to supplement their classes and, in some cases, to replace those classes. Traditional textbooks are becoming more expensive every year and even though they are updated frequently, may not always contain the most recent developments in their field. Multimedia presentations, blogs, chatrooms, access to learning objects, the use of search engines to quickly locate content, and other technology tools offer many advantages, including dollar savings, increased instructional efficiency, greater accessibility, and enhancing learning opportunities in a format that engages today's digital natives.

Key to the growth of eLearning at BCC is that both existing students and new markets can be served simultaneously. Today's students are no longer the people that BCC's system was designed to teach in the 1960's Regardless of their academic preparation for college-level work, young students have spent their entire lives surrounded by technology. It is estimated that the average college grad has spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to

mention 20,000 hours watching TV).[23] Computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives. As waves of technology continue to penetrate society, students of all ages increasingly will expect that BCC provide access to technology and that their courses be similarly technology-friendly. BCC has no choice but to engage both existing learners and new markets with eLearning that match learner preferences for time, format, and delivery.

<u>Workforce Development</u>

Business leaders in Broward County were consistent throughout the Master Planning in their opinion that the College should become the vehicle of choice for training the present and future workforce. Although it is projected that most new jobs during the planning period will be in the service sector and produce low wages, the College can play a key role in assisting business and industry in the County to create new, higher paying jobs. Noncredit education is one vehicle to accomplish this and there is more potential than is currently used in this area to increase service to the workforce.

BCC should improve its market share of adult enrollments, especially those adults seeking job-related skills. This market for Broward County is estimated at more than 400,000 adults.[24] In contrast, the total number of adults (aged 25 and above) enrolled in credit programing in Fall 2003 was 13,052. According to the competitor analysis performed for this study, there are at least an additional 29,000 enrollments in career and technical programs offered by the for-profit and non-profit sector in a 60-mile radius of Fort Lauderdale. Broward County Public Schools estimate their share of adult enrollments in career and technical programs to be about 20,000 learners. The resulting gaps between these providers and the total market is large. Institutions that are able to bridge this gap through scheduling and course format options that match working adults' schedules will prosper. A realistic target for BCC is to increase adult enrollments by these proportions: seven percent for ages 25 to 29, five percent for ages 30 to 34, three percent for ages 35-39, and two percent for ages 40-44. Enrollment projections performed for this Education Master Plan demonstrate a dramatic enrollment increase through the year 2030 if these targets are reached by 2010.

Broward Community College will continue to confront many challenges as population density increases in the County. Foremost among those challenges will be to provide the responsiveness that business and industry will expect. There are some very simple things that can be done to increase the responsiveness of current programs, the first of which is to increase the number of afternoon, evening, weekend, and compressed classes throughout the district. This should be accomplished strategically, based on survey work and contact with local education agencies and citizen groups. Obviously, the College cannot schedule classes in places and at times for no enrollment. As was

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[23] Marc Prensky. "Digital Natives, Digital Immigrants" On the Horizon (NCB University Press, Vol. 9 No. 5, October 2001).

[24] Percentage drawn from Kim, K., Collins Hagedorn, M., Williamson, J., Chapman, C. (2004). Participation in Adult Education and Lifelong Learning: 2000–01 (NCES 2004–050). U.S. Department of Education, National Center for Education Statistics.

seen earlier, however, considerable number of programs are not available in the evening hours.

The College should accelerate efforts to reach out to businesses in Broward County to train their employees and to provide technical assistance to developing businesses. Given the choice, many persons who commute to jobs outside the County would prefer to be employed closer to home. This will be especially true as traffic continues to clog area freeways. Small businesses continue to grow, even in the midst of economic downturns. For example, the number of non-agricultural self-employed reached 12.2 million in 2003 in the United States, an increase of 716,000 or 6.2 percent from 2000's 11.5 million.[1] It is likely that many skilled office workers would prefer to work from home, either for their present employers or for themselves, and that they will want to know more about entrepreneurial opportunities. BCC should capitalize on these trends through providing instruction in developing business plans, business registration, and other key areas that can assist citizens wishing to create new businesses. There are few institutional competitors in this field.

Yet another collaboration with the community comes through the federal Workforce Investment Act (WIA) and providing core services for dislocated workers and others seeking work to providing intensive training services. One Stop Centers have become highly visible throughout the United States as a link between employers and employees. BCC should leverage resources to operate One Stop Centers on its three main campuses. It currently operates a satellite One Stop at its South Campus and further expansion toward providing job seekers a full range of services and greater access to BCC's training programs is desirable. The satellite center at South Campus brings an additional 1,500 individuals on campus each year. County workforce officials estimate that 25 percent of all Individual Training Accounts (ITA's) triggered by WIA in Broward County are issued for clients who wish to study at BCC, meaning that there are perhaps 600 other ITA's that clients take to other educational providers.

Broward Community College also should investigate the feasibility of creating a "generalist worker" certificate under which the College would agree that holders possess key technological, critical thinking, literacy, and teamwork skills for employment. Were, say, 200 of these certificates conferred each year, it would send a powerful message to businesses and industry that the County is fertile location to expand. This, and other processes outlined throughout this Education Master Plan, rely on "actionable data," that is shared by stakeholders and used to improve services and programming.

Information Technology

Much of BCC's menu of services and programs will depend on the quality and accessibility of current data and information. Again, to be effective in meeting future challenges, strategic data are needed about students who apply, those who enroll, and the types of classes and programs they pursue. These data are not readily available at the

[25]Fairlie, R. "Self-Employed Business Ownership Rates in the United States: 1979-2003." U.S. Small Business Administration, December 2004. Accessed on December 11, 2004 from http://www.sba.gov/advo/research/rs243tot.pdf

College. BCC currently collects and maintains a large volume of data. It meets data requests through provision of routine reports and ad-hoc requests by users. The College also makes heavy use of data and information provided back to it by the Florida Division of Community Colleges and Workforce Education through the data it shares with that agency.

BCC is a member of the Florida Community College Software Consortium, a group of institutions whose members have created a shared collection of software to manage institutional operations. BCC makes use of this operational software by maintaining mainframe-based administrative databases using ADABAS database software and is in the process of installing software to enable this current data structure to operate as a relational database, a project which will result in more access to data and information by end users. This change is welcomed for, while BCC has had access to large quantities of data over time, these data have not lent themselves easily to strategic information.

The College has recently elevated its information technology division to a place at the cabinet table and has created a business enterprise intelligence unit to serve end users throughout BCC. This evolution will see information technology move from a custodial role for data through brokering information to decentralizing information so that it is widely shared to support decision-making. This also marks a cultural change in that information technology will be seen not just as executing "operational systems" such as registration, transcription, payroll, and accounting systems. Instead, information technology will need to be viewed as creating information systems that support planning, forecasting, and higher level strategy. This new role will become more obvious when relational database applications come on line, enabling the College to create various data marts that can provide information to managers in real-time, freeing up programmers from responding to a increasing requests for ad-hoc reports. Among the priorities that are to be met using this new technology, an enrollment management data mart should be first.

Before data marts are available, considerable professional development will be necessary for end users.   After using whatever reports have been heretofore available, end users may not know what data to retrieve. Use of data marts also invite questions about data accuracy and definitions. This is to say that the workload in the information technology area will not decrease, it will simply be different as a decentralized environment is developed. Until relational database technology is a reality, BCC is strongly encouraged to develop further the data it now possesses in an online institutional fact book and to create a system of "dashboard" indicators that provide managers a convenient, timely way of looking a key performance indicators of institutional health. Such actions are only short-term solutions in anticipation of much wider access to information promised by data marts. The initiation of a web-based fact book is a critical first step. Broward Community College is one of the few large community colleges without this function.

Broward Community College also has capability of accessing external data. As a member of the Coordinating Council of Broward, the College participates in the Broward

Information Network (BIN), a collaborative effort consisting of health, education, and human service providers in the County. BIN permits data sharing that can assist the College to better understand its clientele. BIN can serve as a platform to provide seamless entry into BCC's programs for students from social service agencies, for example, and can assist with determining the outcomes of their experiences at the College.

FUTURE ENROLLMENTS, SPACE, AND RESOURCES

Broward Community College faces fundamental choices about its future. Pushing the boundaries of its traditions, the College now faces the reality of an increasingly diverse population base and advancing changes in technology. Therein lies great opportunity. No longer only an institution whose prime mission is to prepare its students for transfer to 4-year institutions, BCC must meet new challenges. The future of all of Broward Community College's programs as well as the economic health of South Florida depend on the success of students who are not be able to cross the threshold to transfer and/or high skills programs without remedial help. At the same time, it is critical that the College's core transfer programs maintain their viability while new opportunities are pursued. This report culminates in a series of goals, strategies, and success factors that will serve the College to implement this Education Master Plan.   To pursue this ambitious work will require an understanding of future enrollments and the resources required to serve them.
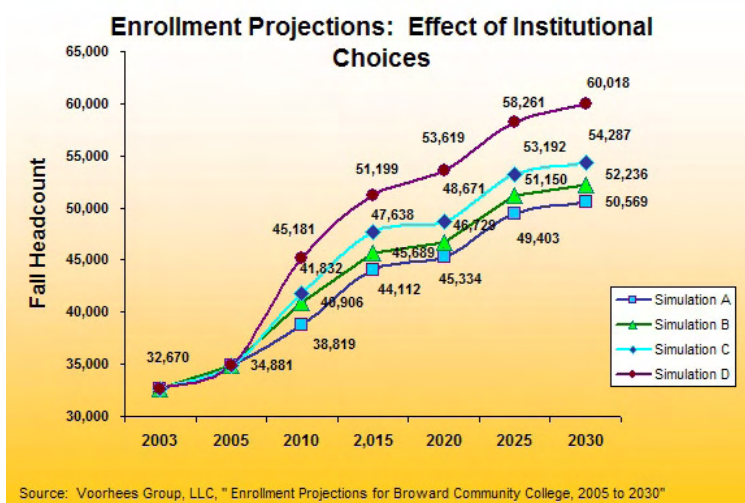
Enrollment Projections

Appendix G is the enrollment projection report prepared for this Education Master Plan. This report projects future fall enrollments using population projections for Broward County prepared by the Bureau of Economic and Business Research at the University of Florida and BCC's current market share by race/ethnicity and age. Four scenarios were built to predict that enrollment through the year 2030. Each of these scenarios assumes different actions by BCC. Starting with BCC's current market share of enrollment compared to County demographics, three of these scenarios assume that BCC will engage in enrollment management to a heretofore unprecedented extent.

Table 17. Enrollment Projections for Broward Community College, Four Scenarios				
Year	Simulation A	Simulation B	Simulation C	Simulation D
2003	32,670	32,670	32,670	32,670
2005	34,881	34,881	34,881	34,881
2010	38,819	40,906	41,832	45,181
2015	44,112	45,689	47,638	51,199
2020	45,334	46,729	48,671	53,619
2025	49,403	51,150	53,192	58,261
2030	50,569	52,236	54,287	60,018

Simulation A assumes that the shares of the Broward County population by race and age enrolling at BCC remain fixed at their 2003 levels. That is, Simulation A models the effect of continuing current marketing and enrollment management strategies. As such, it is a "status quo" model that requires no new efforts on the part of the College. It predicts that BCC will grow by more than half by 2030. Simulation B increases the shares of the Black population ages 18-19 and 20-24 enrolling at BCC in 2010 to 20 percent and 15 percent, respectively. This simulation models the impact of increasing market share by targeting the sub-population of Broward County's with the lowest overall college participation rate. Because, BCC already enrolls a significant number of

Black 18 to 24 year-olds the overall effect of this simulation on projected enrollments for BCC is modest to 2030 (59.9%). However, for students in this category, the effect will be substantial and life-changing. Simulation C models the effect of purposeful institutional actions to target all County residents ages 18-19 and 20-24. It demonstrates the effect of increasing their enrollment at BCC in 2010 to 20 percent and 15 percent respectively. Once again, the overall enrollment gains appear modest for the institution but its effect would be substantial for new students. The last model, Simulation D, illustrates the impact of positioning the College to better penetrate adult and workforce markets. It increases the shares of the total population ages 25-29, 30-34, 35-39, and 40-44 enrolling at BCC in 2010 to 7, 5, 3, and 2 percent respectively. Because BCC's adult penetration rate is currently modest, this simulation carries the greatest overall enrollment impact. Finally, Simulations B, C, and D, assume that the substantial actions that are required will take several years to bear fruit and that, once implemented, the College will continue to work to capture the respective market shares. All new increases in market shares generated by scenarios B, C, and D are assumed to be held constant for years 2010 through 2030.

Enrollment Projections: Effect of Institutional Choices

Source: Voorhees Group, LLC, " Enrollment Projections for Broward Community College, 2005 to 2030"

Program Projections

Table 18 displays projected faculty needs by CIP area. These projections are based on enrollment trends by prefix (see Appendix D). Growth predicted for program areas in tandem with projected faculty retirements and departures (Table 19) makes it imperative that BCC now begin to develop an effective faculty replacement program. Because the data in Table 18 are based on past enrollment, they may not fit the future perfectly. Faculty, working in conjunction with the administration, have an obligation to ensure that their programs attract enrollment. Declining enrollment can be reversed and when that occurs, the College can use the student to faculty ratios depicted in Table 18 as a starting point to allocate faculty resources to fit changing circumstances.

Table 18. Faculty FTE Projections by CIP Area				
CIP Area	Student to Faculty Ratio	Faculty FTE Generated Fall 2005	Faculty FTE Generated Fall 2010	Faculty FTE Generated Fall 2015
Agriculture, Agriculture Operations, and Related Sciences	18	(0.54)	(1.80)	(3.07)
Environmental Science	14	8.19	13.12	18.04
Communication, Journalism, and Related Programs	20	0.52	0.27	0.03
Communications Technologies/Technicians and Support Services	18	0.23	0.31	0.38
Computer and Information Sciences and Support Services	18	30.59	37.30	44.01
Education	20	4.21	4.72	5.23
Engineering Technologies/Technicians	13	8.73	10.78	12.83
Foreign languages, literatures, and Linguistics	18	9.46	7.25	5.04
Family and Consumer Sciences/Human Sciences	20	1.84	2.87	3.91
Legal Professions and Studies	23	1.88	2.13	2.39
English Language and Literature/Letters	20	80.67	98.84	117.02
Biological and Biomedical Sciences	18	34.71	46.01	57.31
Mathematics and Statistics	20	39.89	51.85	63.81
Reserve Officer Training Corps (JROTC, ROTC)	24	0.03	0.05	0.08
Multi/Interdisciplinary Studies	24	0.01	(0.18)	(0.36)
Parks, Recreation, Leisure, and Fitness Studies	24	1.47	1.59	1.72
Basic Skills	18	120.85	163.11	205.37
Philosophy and Religious Studies	24	8.92	12.25	15.57
Physical Sciences	18	34.28	44.39	54.49
Psychology	20	15.83	18.30	20.77
Security and Protective Services	18	6.53	(0.33)	(7.20)
Public Administration and Social Service Professions	24	0.05	0.05	0.05
Social Sciences	24	23.60	29.67	35.75
Construction Trades	13	0.75	1.00	1.26
Mechanic and Repair Technologies/Technicians (Automotive)	13	0.01	(0.01)	(0.02)
Transportation and Materials Moving (Aviation)	18	5.15	5.55	5.95
Visual and Performing Arts	18	26.04	33.00	39.96
Health Professions and Related Clinical Sciences	12	40.11	50.34	60.57
Nursing	10	32.91	42.36	51.81
Business, Management, Marketing, and Related Support Services	24	16.54	16.00	15.46
History	24	11.19	15.40	19.62
Total Faculty FTE		564.63	706.20	847.77
Note: Student Faculty Ratios taken from State Council for Higher Education in Virginia Guidelines for Lower Division Credits. Source: http://www.schev.edu/Reportstats/hedfunding121800.pdf				

Retirements and Departures

More than half of BCC's full-time faculty are 54 years or older. Assuming that these faculty will retire over the next 5 years, when the youngest among them reaches 59, the College will need to replace about 42 percent of its total faculty (Table 19). Controlling for years of service at BCC, and assuming that no other retirement benefits apply to individual faculty decisions, a more conservative 30 percent retirement rate is predicted. Somewhere between these two points lies the actual number of faculty retirements or departures that BCC will need to address by 2010. By December 2004, 27 current faculty had made arrangements to retire over the next several years. Now is the time to begin to prepare for this change and its impact on the institution. Strategic thinking about what types of faculty will be required and what types of skills will be needed to deliver quality learning to the classroom throughout the planning period are critical. Since professionals throughout higher education are aging, and the pool of qualified applicants, especially in mathematics and the hard sciences is much sought after, the competition to replace faculty will be stiff. To

address these challenges will require increased communication between the instruction and the College's Human Resource Office and re-engineering of recruitment and hiring processes. The recommendation section of this report outlines several actions BCC should consider as it seeks to fill professional vacancies.

Table 19. Full-Time Faculty by Age and Years of Service at BCC, Fall 2004								
Years of Service	Age Ranges							
	25-30	31-40	41-50	51-55	56-60	61-65	66-70	71+	Total
1-5 BCC	5	40	43	28	12	6	4	1	139
6-10		9	27	8	6	4	0	0	54
11-15		6	15	11	20	5	3	0	60
16-20		2	12	8	12	16	1	1	52
21-25			0	5	20	8	4	0	37
26-30			2	4	13	4	4	1	28
31-35				2	9	7	3	0	21
36+						2	1	0	3
Total		57	99	66	92	52	20	3	394

Source: BCC Human Resources

Other than known departures, it is not possible to predict exactly when individuals will choose to leave since those decisions are highly personal. Certainly, there is no requirement that employees retire at a given age and many will choose to work beyond the "conventional" age of retirement. However, estimates of the impact of departures on specific programs can help BCC plan for the future. At this juncture, and using the number of faculty over 60 years as a threshold, it appears that certain disciplines will experience the largest departure during the next five years. The number of individuals within each instructional area that meet this criterion by 2010 include: English (29), mathematics (20), science (17), health science (15), business administration (13), behavioral science (13), reading (8), history/political science (8), communications (6), visual and performing arts (5), English as a Second Language (5), wellness (4), and computer science (4). Additionally, it appears that counselors (6) and librarians (4) will also will be aged 60 or greater in the next 5 years. Those areas with three or fewer individuals who matched this criterion are not mentioned here to preserve their privacy.

Space Projections

At the conclusion of this Education Master Plan, Broward Community College will embark on a facilities plan. While the facilities plan will be driven by the conclusions of the Education Master Plan, it is appropriate that this report comment on current and projected space needs as a precursor to a more elaborate study. The facilities plan will benefit from the programming recommendations that follow this section.

Broward Community College currently manages more than 1.4 million square feet in three large campuses and centers. All capital construction at BCC is financed

through the state's Public Education Capital Outlay (PECO) process. The Pines Center was constructed with the assistance of the City of Pembroke Pines. Similarly, a center planned for Weston and scheduled to open in January 2006 was constructed with assistance from that city's government. In both instances, BCC has been allocated the 2nd floor of these facilities. Additionally, a third center is planned for Miramar on the grounds of a former automotive center and presently numbers 20,000 square feet. Each of these mentioned centers is located in the south part of Broward County, in close proximity to some of the lowest performing secondary schools in the County system.

It is not foreseeable that BCC will build any additional large campuses, nor should it. The strategy for meeting forecasted growth will be through the three existing large campuses, its centers that are now operational and those currently on the drawing board, and through provision of services to learners through distance delivery and through space that the College leases or is donated in public or private locations. Most growth in the County will occur away from downtown Fort Lauderdale. The GIS maps appended to this Master Plan show where that growth has occurred since the 2000 U.S. Census. South Florida was recently ranked 5th in the nation for traffic congestion, making it difficult to navigate streets and highways during rush hour and throughout most of the day.[26] In response, there will be an attraction to locate more centers nearer suburban neighborhoods and the College will likely continue to receive more calls to participate in operating more centers. It is strategically important to decide what types of classes and programs should go into these locations. Three factors will dominate discussion about future centers: a) increased population density, b) lack of available space in the County on which new facilities can be located, and c) the impact of new delivery formats and locations. Key to the need for new facilities will be the extent to which the College is able to integrate alternative delivery and new, low- or no-cost locations into its management strategies.

Assuming that no progress is made on the enrollment management front, and utilizing the enrollment projections offered above under Scenario A, the College will need to build an additional 700,000 total square feet to accommodate status quo operations by 2030, based on 85 square feet for FTE student. This ratio represents all square feet found in a typical campus including instructional, student services, administrative, auxiliary, physical plant, and circulation space. BCC's campuses will vary in their needs. The Holcombe Center, for example, will not require any additional square footage through 2005. On the other hand, just in the next ten years, through 2010, Central campus will need an additional 37,000 square feet, North Campus will need 171,000 additional square feet, and South Campus will require 84,000 additional square feet. Projections for South Campus include the Pines, Miramar, and Weston Centers. Again, these projections assume that no progress is made in scheduling courses at times of excess capacity in all locations and that initiatives in distance education do not bear fruit.

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[26]Texas Transportation Institute (September, 2004), <u>2004 Urban Mobility Study</u>. Site accessed September 6, 2004: http://mobility.tamu.edu/ums/congestion_data/

Table 20. Total Square Foot Projections							
	Current SQFT	2005	2010	2015	2020	2025	2030
Central	643,203	611,785	681,209	775,437	791,585	861,084	877,644
Holcombe Center	128,520	59,845	66,647	75,761	78,745	85,385	87,670
North	352,297	470,881	523,388	593,221	615,432	669,095	688,863
South	284,254	330,987	368,471	418,662	429,626	471,200	482,331
Total	1,408,274	1,473,497	1,639,715	1,863,080	1,915,387	2,086,764	2,136,509

Note: Projections based on 85 SQFT per Student FTE

These rough data should be used only as a starting point to address facilities needs. Through enrollment management practices, including scheduling classes at times that match student needs and/or filing time slots with classes when there is classroom capacity, the need to build more facilities may not be as large as these figures foretell. However, if classes are scheduled at only peak times, BCC forfeits many creative opportunities to start new programs and to re-arrange programs to meet the needs of market segments who cannot presently be accommodated with existing schedule building processes. It is the opinion of Voorhees Group LLC that the projected growth will require adding additional square footage to the BCC inventory. However, it is also our opinion that the impact of alternative scheduling, distance delivery, and expanded efforts to locate classes in secondary schools, community centers, employer work sites, and the capacity of existing space should be more fully developed and tested before the data of Table 20 are accepted as the sole alternative facing the College.

The largest facility needs will be for classrooms and laboratory space. The data presented in Tables 21 through 23 should be approached cautiously, however. The effect of alternative scheduling and course formatting has not been factored in these projections. Further, these projections are not built on current program mix, but rather on Student FTE projections. The College will have the final say in how these projections play out through conscious scheduling and decisions about alternative, distance delivery. Finally, these projections do not address the utilization of current classrooms. BCC probably does not meet guidelines in use in other states that call for classrooms to be used for an average of 60 hours each week and teaching laboratories for 40 hours. It was beyond the scope of this Education Master Plan to examine utilization data, however they are available through the Division of Community Colleges and Workforce Education. They are critical to the forthcoming facility plan.

Given these cautions, it appears that the most immediate (to 2005) classroom needs are at North and South Campuses. The South Campus, in particular, houses its growing nursing program in temporary structures. However, throughout the planning period, it appears that North Campus will have the largest unmet classroom need. The Holcombe Center will not reach classroom capacity by 2030. Academic laboratories show a similar pattern, with the largest need projected for North and South.(Table 22).

		2005 SQFT Required	2010 SQFT Required	2015 SQFT Required	2020 SQFT Required	2025 SQFT Required	2030 SQFT Required
Table 21. Projected Classroom Needs							
Location	**2004 Net SQFT**						
Central	81,957	75,998	84,622	96,328	98,333	106,967	109,024
Holcombe Center	14,236	7,434	8,279	9,411	9,782	10,607	10,891
North	41,943	58,494	65,017	73,692	76,451	83,117	85,573
South	35,173	41,116	45,773	52,008	53,370	58,534	59,917
BCC Total	**182,858**	**183,043**	**203,691**	**231,439**	**237,936**	**259,225**	**265,405**
Note: Projections based on 10 Assignable Square Feet per FTE Student							

Unlike general classrooms, academic laboratories appear to be needed at all four locations (Table 22). In contrast, vocational laboratories (Table 23) appear to be met throughout the planning period at all locations except the Wills Holcombe Center.

		2005 SQFT Required	2010 SQFT Required	2015 SQFT Required	2020 SQFT Required	2025 SQFT Required	2030 SQFT Required
Table 22. Projected Academic Laboratory Needs							
Location	**2004 Net SQFT**						
Central	55,447	60,798	67,698	77,062	78,667	85,574	87,219
Holcombe Center	4,317	5,947	6,623	7,529	7,826	8,485	8,713
North	28,997	46,796	65,017	58,954	61,161	66.494	68,458
South	13,337	32,893	36,618	41,606	42,696	46.827	47,934
BCC Total	**105,085**	**146,434**	**162,953**	**185,151**	**190,349**	**207,380**	**212,324**
Note: Projections based on 8 Assignable Square Feet per FTE Student							

		2005 SQFT Required	2010 SQFT Required	2015 SQFT Required	2020 SQFT Required	2025 SQFT Required	2030 SQFT Required
Table 23. Projected Vocational Laboratory Needs							
Location	**2004 Net SQFT**						
Central	46,790	30,399	33,849	38,531	39,333	42.787	43,610
Holcombe Center	2,864	2,974	3,312	3,765	3,913	4,243	4.356
North	42,661	23,398	26,007	29,477	30,580	33,247	34.229
South	26,381	16,447	18,309	20,803	21,348	23,414	23.967
BCC Total	**120,901**	**73.217**	**81,477**	**92,575**	**95,175**	**103,690**	**106,162**
Note: Projections based on 4 Assignable Square Feet per FTE Student							

These data suggest that if little is done about facilities over the next several years the results of inaction it may not be obvious to college stakeholders by 2005 and only marginally noticeable by 2010. In relation to general classrooms, if BCC continues to maintain its current operations and scheduling options, it will be only by the year 2010 when stakeholders will notice that an additional 20,000 square feet of general classrooms will be required. This square feet can undoubtedly be found either in new centers,

through partnerships, or by distributing programs more strategically through existing campuses. It should be remembered that these estimates are based on Scenario A, the least aggressive strategy, and therefore is a very conservative projection of general classroom needs. If strategies outlined in subsequent sections are successfully implemented, these projections could be augmented by 20 percent. In any eventuality, it is not a prudent tactic for BCC to wait to plan facilities until space needs become unmanageable. Instead, planning for space needs to 2015 should begin now.

The most critical facility need through the planning period is academic laboratories. Again, these projections are based on a ratio of projected student FTE to square feet by location, and not by developing scenarios based on the impact of new programs. Nonetheless, it does appear from interviews with faculty and academic administrators that laboratory space is a pressing need that is felt strongest at North and South campuses. If North Campus continues to develop science-related technical programs, even more lab space will be necessary. A recent renovation of academic laboratories at Central will help with current needs, but will not be a complete answer to long-term needs. Surprisingly, it appears that vocational laboratory square footage is adequate in all locations (Table 23) although the College will want to ensure that this space contains the types of instructional equipment that matches state-of-the-art industry specifications.

The College recently has been approached by Florida Atlantic University. FAU plans to construct a new building on the northwest corner of the Central Campus in Davie. It is possible that this facility could be used simultaneously by both institutions. Suggested BCC programs for this location could include a 2 +3 program in architecture, as a location for a 2+2 program in secondary education, and/or as a location for expanded College Prep courses (FAU is prohibited from offering remedial education). Such joint use seems especially wise given the looming 160,000 square foot shortage predicted for Central Campus by 2015.

Program Locations

North Campus

Unique programs at the North Campus are in the health science area. North also houses the biomedical engineering program. Because these programs are math and science intensive and because program space and expertise are in place at North, these programs should continue there. Future programing that addresses high tech industry needs, especially those programs recommended in this Education Master Plan that require new or hybrid vocational lab space also be located at North. This not to say that students could not begin 100-level classes at other locations throughout the district or elsewhere, but that 200-level classes in appropriate program areas would be offered at North. New programs recommended by this study that fit with the current program mix at North include cybersecurity, occupational therapy assisting, assisted living administrator, and home health aid. If a decision to pursue veterinary technology is made, North should be considered as a program location because it is the location of other health-related programs.

North Campus is now negotiating with the City of Coral Springs to locate classes in a vacant shopping center in that municipality. There is an attraction to providing postsecondary education opportunities throughout the County in convenient locations and at a cost structure that ensures BCC a profit. This practice ought to be continued where feasible as a way of addressing community needs while freeing looming space constraints on all campuses.

Central Campus

Unique programs at Central Campus include the Institute for Public Safety, dental assisting, and the planned Holcombe Institute for Teaching and Learning Excellence. Because of its co-location with Florida Atlantic University and close proximity to Nova Southeastern University, Central Campus has opportunities not available to the other two main BCC campuses. The need for more hospitality workers in South Florida and the location of a successful 4-year program at FAU, for example, provides a foundation for strengthening BCC's existing program. Co-location and proximity also provide the opportunity for BCC to provide College Prep classes under contract with Nova Southeastern and Florida Atlantic Universities. Bailey Hall and the Buehler Planetarium, Observatory and Science Center provide Central Campus other unique opportunities. These include a potential partnership with the Broward Performing Arts Center to expand theatrical productions thereby strengthening the technical theater program. Similarly, planetarium, among other uses, provides an mechanism for strengthening science education training for prospective teachers. Both facilities also have untapped potential for short-term noncredit programming.

New programs recommended in this study that could be located at Central include teacher assistant, translation/interpreting, homeland security, logistics/transportation management, and import/export specialist Additionally, Central could be the location for a more visible 2+2 program in teacher education or, alternatively, a standalone program in teacher education if that is the direction that BCC determines that it will pursue over the next several years.

South Campus

Unique programs at the South Campus includes the Aviation Institute and multimedia technology. South Campus also administers one current off-campus center. Two other centers are planned for the southern end of Broward County, one of which will house vocational programs. Drawing on these centers (see below) and combining existing expertise, these new programs that might be located at South include, global information systems/geomatics, and construction supervision. Should BCC decide to pursue a program in recording arts technology, South appears to be a logical location given the existing multimedia technology program. Because of proximity to the planned Miramar Center, South should also be the coordinating campus for a revitalized automotive service program including retail management training for the rental car industry. Included in this mix might also be non-credit automotive car care courses.

Holcombe Center

Because of excess space, this location is the most malleable of BCC locations for creating new opportunities. Currently, no unique credit programs are offered here. BCC recently closed its Commercial Center site and moved noncredit and business/industry training to this location. It is logical that the Holcombe Center be the location for the coordination of noncredit programs throughout the district. Located near the Broward Alliance, the Broward Tourism Board, and numerous businesses in the downtown Fort Lauderdale area, he Holcombe Center should be the visible noncredit, short-term business training center for the College. Opportunities generated here would be shared across other instructional locations including business-specific assessment testing, compressed hospitality training, English as a Second Language instruction, and senior citizen programming. At the same time that these expanded activities occur, BCC should continue to offer credit instruction, especially that instruction that compliments existing co-located FAU programs.

Pines, Weston, and Miramar Centers

The Pines Center originally was planned as a business and technology-related instructional center. It has since grown to more than 3,500 students and now offers a range of classes in the liberal arts as well as college preparatory courses. Judging by enrollment gains, it is meeting community needs. However, its growth has been unchecked and is not part of an overall growth plan that incorporates a strategic mix of classes and programs that emanate from the South Campus.

Since the planned Weston Center and the Pines Center are landlocked, expansion of facilities to meet future growth at these locations is not an option.   It also is unrealistic to expect these locations, and other future Centers, to become "clones" of the existing campuses both because of space limitations and because of strategy necessary to drive other college-wide programming decisions. Strategically, the types of classes and programs should vary across site. While there would be consistency in total general education offerings across all campuses, not all general education courses would be available in land-based format at each campus or at each center. For example, in Centers that are only 6 miles apart, in the case of Weston and Pines, offering the same courses at competing times is not wise. Further, these centers are located near the South Campus. Accordingly, thought needs to be given to limiting 200-level courses at these Centers to fit better the need to manage courses and enrollments in south Broward County. The Miramar Center has available land for expansion. It is slated for delivery of automotive technology programs. Thought should also be given to locating the existing nursing program at South Campus in this location along side Adult Postsecondary Vocational (clock hour) programs. Finally, in response to looming facility shortages, the College should accelerate efforts to begin to offer courses in existing K-12 facilities and/or community facilities.

<u>Tigertail Lake Facility</u>

The College recently acquired this facility from the City of Dania Beach. It is currently used as a location for watersports classes and for the Young People's Summer College. This facility houses a large meeting room, a small conference room, and a picnic area. The College rents this facility to the public and has discussed expanding it for use as large conference center since a large hotel is located in close proximity. Should these discussions reach fruition, Tigertail lake could become the location at which BCC offers programs in hospitality management and culinary arts.

<u>Organizational Structure to Support Program Delivery</u>

To meet accelerated growth predicted for the County and the need to streamline decision-making processes accountable to students, the current process for determining course schedules should be changed. The increased demand for afternoon, evening, weekend, and compressed classes will require corresponding actions by BCC. As the district expands its offerings it will be increasingly important to ensure quality control and sharing of instructional expertise. To provide flexibility in year-round planning, course management and delivery, and to cover course and program delivery in new locations, the College should consider locating more decision making authority in campus deans.

A push to redesign courses in conjunction with business and industry should be initiated throughout the instructional area of the College. It may be advisable to hire one or more curriculum specialists for workforce development and distance education. The College ought to look at creating a menu of competencies for all of its courses and include within it specified levels of performance signifying when competencies have been met. Organizationally, this will require much effort in convening faculty and business/industry committees. While the volume of work will be large, the dividends will be great. It should be noted that the identification of competencies as units of learning is not exclusively for career and technical programs. Academic areas, too, can benefit from examining their competencies to ensure consistency in learning delivery. Initiatives now being pursued under the Florida Department of Education's new K-20 accountability and FDOE's strategic plan would support BCC's work in this area.

BCC should consider elevating the visibility for all developmental education efforts (GED, ESL, and remedial English, math, and reading). At the given time it appears that embedding these responsibilities in instructional units rather than creating stand-alone departments charged with student success is prudent. As mentioned ahead student success is , this work is fundamental and everyone's responsibility. Second, increasing the visibility for career and technical programs is important. This will promote student enrollments. Similarly, the issue of whether degree programs should outnumber certificate programs bears further investigation.

Expansion off the main campuses also invites strategy about staff deployment. One such strategy is to assign staff charged with district-wide responsibility to functional areas in student services and program support in outreach areas. These individuals would

be assisted by other district personnel with specific expertise in each functional area as part of a campus-by-campus rotation of staff. Similarly, the full-time faculty assigned to each location would be supplemented by part-time faculty as well as rotating district faculty. It is anticipated that many of the common district functions, including registration, financial aid, and fee payment, would be standardized across a technology platform, allowing each location to achieve economy of scale while providing for consistency in operation.

OPERATIONAL PLANNING AND BUDGETING PROCESSES

This section of the Master Plan deals with the internal processes that can drive the Education Master Plan. To reach the goals established by this Education Master Plan will require solid information that is continuously monitored, a visible planning process, and a clear link to institutional budgeting. It also will need to be inclusive. Several of the recommended strategies in the succeeding section will require additional dollars although many can be reached through redirecting of existing resources. To be successful the College will need to ensure that all stakeholders understand the Master Plan goals as well as the process for bringing actions forward that support those goals. Eight goals are recommended for Broward Community Colleges through the year 2015.

BCC's process should be "rolling" to signify that room exists for modification in strategies and success factors in response to changing circumstances and demand. The time horizon for this process is three years. The backbone of the Education Master Plan, its eight goals, is expected to remain consistent from year to year but opportunities, unforeseen events and monitoring of the College's progress may mean that components of the plan are revised from year to year. Accordingly, the process outlined below would commence immediately and would result in a three-year plan for the 2005-2006, 2006-2007, and 2007-2008 years. During the 2005-2006 year, progress would be monitored according to the success factors developed in the initial planning process. Necessary modifications would be made to strategies and success factors based on resources, successes, and current conditions. At the conclusion of this process, strategies and success factors for the "new" third year (2008-2009) would be developed and "rolled" forward. This process will permit the Education Master Plan to be a living part of BCC's culture while ensuring that it remains viable.

Strategies and Success Factors

This Education Master Plan makes use of the terms "strategies" and "success factors" to support BCC's recommended goals. Strategies are those actions that support BCC's goals. They may be new activities or existing activities. In either case, there is a clear link between their implementation and the College's ability to reach a given goal. A success factor is linked to strategy and provides an unambiguous method for determining whether a strategy is successful. Success factors are measurable and tangible; although they may be developed from interactions among groups of employees, the process of attending meetings is not, in itself, a success factor.

Recommended strategies and success factors to implement this Education Master Plan are found in the next section. They are intended as advice for Broward Community

College and are subject to modification as circumstances dictate and as other solid ideas emerge. Careful consideration of success factors on a continuos basis will tell BCC's decision-makers whether a given strategy is fruitful and, ultimately, whether that strategy ought to be modified or even continued. In the process envisioned for BCC, strategies themselves can be changed through the annual planning process.

Bottom Up Planning

The president's cabinet should be the oversight body for implementing BCC's Education Master Plan. Voorhees Group LLC recommends that planning start at the campus level. Each Provost should develop strategies and success factors to support college-wide goals in conjunction with all employees and students. The more persons that are involved at the campus level, the more comprehensive and efficient BCC's actions become. Additionally, those senior administrators with district-wide responsibilities should work with their employees in the same fashion. The task for provosts and senior administrators should not simply be to gather every possible strategy and associated success factor for presentation to the cabinet. Rather, the task is to work with employees and students to bring forth the best strategies to support the eight Master Plan goals. The cabinet will be the place where final decisions about which goals and strategies should be pursued within a given year.

Operational v. Strategic Planning

There is a wide difference between activities that are day-to-day operational and those that are truly strategic in nature. Not everything that is done at BCC on a day-to-day basis is strategic. The previous strategic plan was a clear advance for the College but contained activities that a continuously improving organization would do as a matter of course. Few of these activities involved making conscious choices about the future of the College by aligning institutional budgets or providing a way of measuring progress. Strategic choices   It should be the cabinets role to distinguish those strategies that have sustainable impact across the whole institution and those that simply reflect good work that ought to be pursued as a matter of course by a continuously improving college. This level of planning requires managers to consider all activities within their units, what they contribute to BCC, and whether all activities should continue. Accordingly, the goal in this process is to act strategically while continuing to pursue excellence in current operations.

Budget Links

The link to budgeting process is critical.   Although BCC enjoys solid financial footing, its resources are not unlimited. In the context of the institutional planning process, all managers need to take a very long look at costs and specify the resources that are necessary to accomplish each strategy. Managers should carry the burden of identifying a budgetary source for recommended strategies, where dollars are necessary to accomplish a given strategy. Experience suggests that many strategies can be

accomplished by reallocating present resources and/or by creating new resources through entrepreneurial activities.

Planning Calendar

Voorhees Group LLC recommends a rolling three-year planning process to support the Education Master Plan. This process will conclude each year through the College's budgeting and planning cycle to form a collective, district-wide response to the Master Plan's eight goals. All strategies should be refreshed each year in conjunction with the planning and budgeting process. The process is envisioned as a cycle with the approximate target dates specified below for each year.

> March 1, provosts and senior administrators present strategies and success factors for the next year to the cabinet for consideration.
>
> March 15, cabinet begins to hold hearings at each of the three main campuses
>
> April 1, the cabinet determines which strategies and success factors will comprise the College's plan for the next year. Actions are communicated back to all stakeholders along with an evaluation of the current year's strategies.
>
> May 1, the cabinet finalizes budget for the next fiscal year including the dollars that are matched to strategies.
>
> May 15, annual plan including goals, strategies, and success factors is published with specific responsibilities affixed.
>
> July 1, new fiscal and planning year begins
>
> November 1, campus and stakeholder input meetings commence. Review plan and make recommendations about strategies and success factors for current year and for year two and three.

Other Planning and Budgeting Advice

The College will need to be very judicious in the number of goals strategies that is pursued. The College should consider a very limited set of goals and strategies (perhaps no more than three or four goals, for example) that are truly pivotal. This does not mean that if strategies do not make the annual plan that they are unimportant. Careful attention to which strategies are truly strategic and which are operational will serve the College well as a dividing point. When these decisions are made, it is critical to convey the strategic nature of how strategies and success factors were culled to all parties involved in the planning process. Stakeholders in planning should not loose sight of the value of this process if strategies that are near and dear to them are not acted upon

immediately Rather, the message to all employees is that this process is inclusive and serves as an open avenue for all employees to become engaged in strategy. Ultimately, those strategies that survive the annual process reflect the College's collective judgment and expertise, the very essence of strategic planning.

RECOMMENDATIONS, SUGGESTED STRATEGIES AND SUCCESS FACTORS

With current and future students as the focus for all operations and decisions about Broward Community College's future, Voorhees Group LLC recommends that Broward Community College pursue the goals, strategies, and associated success factors below. Accomplishment of these goals will require active participation of all of BCC's stakeholders. To succeed, these goals should not be pursued separately; because they overlap in important ways, they should be pursued as a whole. The goals below are followed by suggested strategies and success factors that are a starting point for Broward Community College to initiate a sustainable planning process. .

Goal One: All administrative and curricular decisions made at the College are student and learning centered. Decisions are based on the access and success of all learners to quality, affordable learning opportunities that match their needs and that promote a well-educated citizenry.

Rationale: BCC has a long history of service to students as well as a commitment to becoming a premier learning organization. However, its penetration rate for key age groups and market segments could be deeper. While there is great understanding of the students presently served by the College, there is less knowledge about those citizens of Broward County who are not currently served. Like all continuously improving learning organizations, the College's overall performance can be enhanced in ways that ensure a tight match between the College's operations and the needs of current and prospective learners. Such a course requires establishing and nurturing a culture of inquiry that will permeate the College. The College also faces significant competition for students from nimble proprietary enterprises.

In the meanwhile, BCC's students are engaged in "multi-tasking." It is a plain fact that many students have to learn to balance three factors: work, education and family. If these three components reach a crisis point, unfortunately education is usually the component which is sacrificed or given a low priority.   Akin to this factor is what students perceive as a need to have the college assist them in non-academic problem solving.   Despite that fact, the College needs to respond to the situation created when more than one-third of all community college students in the United States say they rarely use advising services while nearly 50 percent say they rarely, if ever, use career counseling.

Suggested Strategies

- Continuously analyze changes in student demographics, preferences, and attitudes as well as social, economic, technological, and demographic changes in Broward County, South Florida, the nation, and the world. Benchmark these indicators to evaluate shifts. Make appropriate, immediate adjustments in curriculum, programming, delivery formats, and course schedules.
- Develop an on-line fact book that describes trends in student demographics and success.
- Continuously analyze social, economic, and demographic changes in Broward County and South Florida. Use this information to predict future program needs. Meet annually or biannually with County and regional planners to explore the implication of these trends for the College's programs.
- Examine the full breadth of career and technical programs instructional programs to ensure a match with local and regional labor markets.
- Actively seek niche programming. Market those niches to segments that could benefit by participation.
- Develop marketing strategies that are predominately based on linking market segments to matched programs. General publicity is helpful, but targeted marketing is critical.
- Increase the data and information available for decision making to BCC program managers including deans, directors, and their assistants.
- Provide continuous staff development and professional learning opportunities for all directed at identifying and responding to the needs of an increasingly diverse student body and learning preferences.
- Improve cyberadvising capability to provide avenues of advising that cannot be met through traditional one-to-one contact with students, especially during peak registration periods. The "LifeMap" model employed by Valencia Community College may bear careful examination as a way to approach this need.

Success Factors

- Availability of an on-line fact book.
- Publish periodic updates for College stakeholders providing evidence of changes in college operations that result in increased student success.
- Finish the first report of student success under the "Triple Guarantee Program" under which students seamlessly progress from the public school system, through Broward Community College, and ultimately to Florida Atlantic University.
- All institutional publications reflect a consistent message that the College has a "student-centered" focus in all of its operations

- Students sit on all planning and decision making committees and advisory councils. All committee and advisory council memberships are posted on the College's web page with the student members prominently displayed.
- All staff and full-time faculty have participated in a "student-centered" awareness activity by the end of the 2005 calendar year.
- Institutional planning and decision making, curricula development and delivery, and outcomes assessment/evaluation will include the analysis of student productivity, demographic trends of enrolled students and the service area, and existing and emerging needs for educational and training services in Broward County and South Florida. In this way, campus stakeholders will assume an "analytic culture" in the management and leadership of the College.
- Routine publication of a matrix that relates each of the College's programs to the market needs that they are meeting.
- Host a student roundtable to advise campus leaders and faculty about issues/barriers that impact the enrollment, i.e., racial issues, financial issues, and class offering locations and times.
- Alumni surveys indicate that graduates are pursuing venues that the College prepared them for and feel that their time at the College was critical to their success.
- Seventy percent of the graduate of academic programs/transfer programs are enrolled in four-year programs within one year of finishing their work at BCC
- Student surveys indicate that 90 percent of current students are satisfied with enrollment and scheduling processes and are satisfied with the instruction that they are or have received.
- Marketing resources are increased, but only strategically to match programs more closely to market segments.
- Existence of expanded alternatives for student advising.

Goal Two: Respond directly to the current and projected racial, ethnic, and income patterns in Broward County.

Rationale: Broward County is ahead of the racial and ethnic diversity that will sweep the United States over coming decades. Including immigrants, the shift toward increasing Black and Hispanic presence in the County is already experienced at the College. Further, at a time when a significant proportion of the County's population is in transition, the income of families who move into the County is less than those who leave. These trends will accelerate within the County over the next ten years, ahead of even more changes in College operations, curriculum, and programming. The College's penetration rates among categories of persons of Color in the County vary but they can be improved substantially across the board. About 40 percent of the faculty and professional staff are anticipated to retire in the next five years, providing the College a substantial opportunity to respond to this goal.

Suggested Strategies

- Celebrate the College's demographics in public forums, including accelerated marketing, that seek to educate Broward County about its role as a bellwether in the nation's changing face. Accent what this means for the future County workforce.
- Target 18 to 24 year-olds of Color to increase their participation and subsequent success rates.
- Collaborate with Community Based Organizations that are presently serving immigrants and poor populations to share curriculum, especially competencies for English as a Second Language courses, and to link together to provide seamless transitions from their education efforts to those programs offered by BCC. Recent expansion of English for Academic Purposes courses slated for 2005-2006 will provide opportunities for students and new partners alike to serve an immigrant population that is rapidly expanding in the County.
- Strengthen English as a Second Language programming by expanding intensive, short-term instruction for professionals immigrating to Broward County.
- Create International Centers on each campus that house ESL programming, cultural awareness activities, and space for informal student networking.
- Intensify efforts to locate, recruit, and retain a diverse faculty and professional staff not simply by advertising, but by networking with professional and trade associations, and by "growing our own" future professionals by actively supporting promising students of Color to pursue further education that leads to future professional employment at BCC.
- Encourage efforts to expand the Honors Institute as a vehicle to promote diversity and academic excellence at BCC. Four of 10 current students in this program are from countries other than the United States and a significant number of participants are students of Color.

Success Factors

- An increase in market share of students of color ages 18 to 19 and 20 to 24 from the current 13 and 11 percent, respectively, to 20 and 15 percent by 2010.
- By the year 2010, fifty percent of the faculty and at least fifty percent of the staff will be from non-White ethnic groups represented in Broward County.
- A plan will be in place that sets hiring targets through 2010 for faculty and staff.

Goal Three: Target increased success rates for students placed in College Preparatory curricula.

Rationale: More than 80 percent of BCC's new students are not immediately ready to succeed in traditional college classes because of skill deficits in math, English, and/or reading. The success of these learners--many of whom are minority, first-generation, and/or low-income students--will determine the long-term viability of the College's transfer and career and technical programs. Moving students through required College Prep sequences in an expeditious manner while maintaining quality outcomes is a critical task facing BCC. For example, only about five (5) percent of College Prep students eventually complete an Associate's degree. The College is now in the first, planning year of the national Achieve the Dream initiative and will prepare a proposal to the Lumina Foundation in March 2005 to participate in a national three-year project to improve the overall success rates of low-income and minority students through the Associate's degree. The College will need to show that this project is self-sustaining thereafter.

Suggested Strategies

- Nurture a culture of inquiry in which data and best practices drive success in the College Prep program.
- Articulate the competencies required at each stage of the College Prep curriculum. More clearly identify any gaps between the College Prep curriculum and the "regular" curriculum.
- Similarly, identify the gaps between successful performance on K-12's Florida Comprehensive Assessment Test (FCAT) and those competencies measured by higher education's College Placement Test (CPT). Make parents and K-12 audiences more aware of these gaps to stem false expectations about college and to identify strategies that can help high school juniors, seniors, and/or dropouts prepare more adequately for college entry.
- Host parent meetings to discuss college success, especially reaching out to parents of middle school students, in particular among low-income and minority serving schools.
- Involve successful College Prep students in peer tutoring, using this technique to further develop College Prep learning communities.
- Complete the at-risk student tracking system now under development to aid faculty and administrators to monitor progression of College Prep students and to make appropriate interventions.

Success Factors

- Launch an interactive webpage to share best practices and data about student progression through the College Prep curricula.
- A written report that illustrates the gap between College Prep competencies, the FCAT, and BCC's "regular" curriculum. Periodic updates to that report.
- All students assigned to College Prep will participate in a learning community by the end of 2005-2006.

Goal Four: Become the vehicle of choice for training the present and future workforce and to drive economic development for Broward County.

Rationale: There is an increasing need for an educated workforce that matches Broward County's steady growth. Broward Community College--through purposeful action and in conjunction with its partners--can become the economic engine for Broward County. Although it is projected that most new jobs during the planning period will be in the service sector and produce low wages, the College can play a key role in assisting business and industry in the County to create new, higher paying jobs. Noncredit education is one vehicle to accomplish this and there certainly is more potential than is currently used in this area to increase service to the workforce. Also, the credit program also has significant room to meet workforce needs. The future will be bright for BCC graduates with appropriate skills.

Suggested Strategies

- Accelerate efforts to reach out to businesses in Broward County to train their employees and to provide technical assistance to developing businesses.
- Explore the feasibility of relocating existing One Stop Centers now located off-campus to each of the College's three large campuses to provide students seamless access to College programs.
- Target small businesses, especially those County residents who are interested in starting small businesses, with short-term training in key areas and with support.
- Develop a generalist program that results in the College certifying that completers have key technological, critical thinking, literacy, and teamwork skills for employment.
- In conjunction with employers and other partners, consider developing new certificate and/or degree programs in these areas: tourism and hospitality management, transportation management and logistics, small business management, and electronic commerce.
- Carefully examine scheduling and course format options. Base learning delivery on expressed needs of employers and adult learners for learning formats, time, and locations.

Success Factors

- An increase in the market share of adults enrolling at BCC by 2010. The share of the County's adult population by age cohort would be: seven percent for ages 25 to 29, five percent for ages 30 to 34, three percent for ages 35-39, and two percent for ages 40-44.
- Results from potential student surveys used by the College in scheduling and curriculum development.

- Establishment of a "Workforce Council to the President" to advise campus academic and administrative leaders about the existing and potential workforce needs of the County and South Florida. The Council will be made up of major political, industrial, and government leaders in Broward County and South Florida.
- An increasing number of technical program graduates will be employed in jobs for which they have been trained.

Goal Five: Increase entrepreneurial actions across the College by seeking new revenue sources.

Rationale: Funding for community colleges has been counter cyclical. In economic downturns community college enrollment increases while state funding decreases. At the same time, most community colleges focus on increasing revenue rather than improving efficiency. In 2004 the state of Florida recognized the negative impact of prior funding decisions and improved funding for the community college system. This current, favorable climate should be capitalized upon. While state assistance and tuition have provided stable support for Broward Community College to meet current operations, this revenue growth is generated by corresponding enrollments growth, leaving little flexibility to pursue new initiatives. Alternate revenue is a critical BCC need. The goals proposed by this plan as well as other realities that BCC will face will require additional resources. Recruitment and retention of increasing numbers of low-income and minority students while meeting the needs of current students, for example, cannot be accomplished without recognition of additional cost. Enhancements and alterations to curricula also are not inexpensive. To meet these challenges, BCC will need to develop opportunities that are before it and seek new pathways to increased revenue.

Suggested Strategies

- Become more aggressive in providing short-term, focused training opportunities for employers in Broward County. Such activities may not generate large sums but can extend the College's existing networks in ways that help it identify other opportunities.
- Increase the number of grant proposals to external agencies, especially to the U.S. Department of Education and National Science Foundation. Because of its proportion of disadvantaged students, BCC is eligible to submit proposals to Title IV federal TRIO programs and the Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). BCC also will qualify through an application process for Title V, Developing Hispanic-Serving Institution institutional grant program.
- Increase relationships with foreign educational institutions. This provides the College with the opportunity to link its programs with other environments while providing potential new dollars.
- Consider developing more learning content that may attractive to other colleges and consortia.
- Increase unrestricted giving. Most of the dollars available in the Broward Community College Foundation are restricted to student scholarships.

While this is a laudable accomplishment, fundraising should be increased for unrestricted purposes that match College growth. Nationally, private support makes up 12.5% of university budgets and only 2.6% of community college budgets. There has been some improvement. For example, community colleges only received 2% of total giving to higher education in 1993. That has increased to 5% in 2002.

Success Factors

- Successful submission of funding proposals for Title IV and V grants and contracts
- An ongoing environmental scanning process is in place to identify funded opportunities in South Florida for which the College could compete.
- Revenue from entrepreneurial activities such as contracting with certain industries for specific training and education programs increases by 10 percent each year.
- By January 2006, a unique program offering within a consortium of neighboring colleges will be created.

Goal Six: Strengthen relationships with the Broward County Public School District.

Rationale: Broward Community College and the Broward County Public Schools have developed a strong working relationship. A significant proportion of BCPS graduates enter BCC immediately after graduation. At the same time, the secondary school dropout rate in BCPS is higher than the state average and only about half of all secondary school freshmen receive standard diplomas. It is time for both parties to address these issues head on by focusing of combined efforts. Establishment of the Holcombe Institute for Teaching and Learning Excellence will serve as one springboard to accomplish this goal. So, too, will joint efforts to penetrate more deeply middle and high schools that serve minority and low-income students and their families.

Suggested Strategies

- An expanded early/middle college effort should be launched to increase both the high school graduation and higher education participation rates of low-income and minority high school youth. Such work should seek to systematically educate students as young as 6th grade and their parents about college opportunities and necessary preparation.
- The College Academy @ BCC is located at the Central Campus and is a successful early college model. This model ought to be extended throughout the County, beginning with similar academies at the South and North Campuses. New Academies would seek to widen the participation of low-income and minority students who may not necessarily have the highest qualifying grades and test scores for admission but who are--more importantly--highly motivated to pursue higher education. Establishment of new Academies, however, can only be brought about by increased financial participation from BCPS.

- Focus on recruiting and retaining world class educators to Broward County through the planned Holcombe Center. This Center also will be devoted to action-based research into teaching and learning as well as helping BCPS meet the annual demand for 1,000 new teachers through alternative certification programs and to assist BCC to establish more prominently as a place that values excellence in teaching.
- BCC should begin the process of determining whether it wishes to seek state approval for offering baccalaureate programs in teacher education. This possibility should be approached cautiously and in full view of other providers of teacher training. Whether a decision is made to pursue such approval or not, it is important to gather the facts and to assess strengths and weaknesses in the County and State of Florida's plans to place highly qualified teachers in each classroom.
- Conduct regular faculty-to-faculty and administrator-to-administrator meetings to align curriculum, develop common assessments, and to develop programming to increase the awareness of BCPS students about their career and further education opportunities.
- Work cooperatively with state agencies and BCPS to produce strategies that address the gap between competencies associated with successful performance on K-12's Florida Comprehensive Assessment Test (FCAT) and those competencies measured by higher education's College Placement Test (CPT). Currently, high school students can pass the FCAT only to find their subsequent performance on the CPT places them into remedial education.

Success Factors

- Presentations are made each year by College faculty and staff to students in all the middle schools in the Broward County
- Faculty from BCC and teachers from the local high schools meet regularly to discuss curriculum alignment issues, particularly in math and English disciplines.
- Initiate summer programs on campus for children from low-income families that are aimed at building expectations in these children that they can go to college. Develop mechanisms to make parents aware of various avenues that can be taken to give their children an education.

Goal Seven: Re-examine the format and delivery options for all courses.

Rationale: The objectives that learners seek vary widely and to satisfy those objectives they choose learning models that match their interests, available time, and resources. An increasing truism in American higher education is that talent knows no boundaries. Learners, including adults who commute to work in ever more congested conditions, are increasingly cautious about how they allocate their time.   Development of alternative formats (compressed, 5 week, 8 week, Saturday) for courses as well as accelerated alternative, on-line delivery strategies (Internet, hybrid, technology-enabled) will help BCC meet learner needs and can ease the land-based scheduling burden while helping to

alleviate crowded campuses. The College is currently examining its general education offerings to identify course competencies. Building on this momentum, the College should also examine the total curriculum so that learning is measured in individual courses by competencies that students are expected to demonstrate and not by "seat time." Expressed as units of learning, competencies become the method by which courses are "bundled" and "unbundled," allowing flexibility in delivery that is presently constrained by the standard academic term and lack of classroom seats at peak times. BCC has made great progress in implementing technology across its courses and while more good work lies ahead, it is also clear that current scheduling and course format options for significant market segments will not meet current and future needs.

Suggested Strategies

- Express existing courses in competencies and share these competencies with current and prospective learners as well as employers. Use the language of competencies to drive college-wide discussions of learner needs.
- Pursuit of a learner models driven by competencies does not mean re-inventing the wheel. BCC should consider appropriate use of the Secretary's Commission on National Standards (SCANS) repository as well as it should consider participating in learning object repositories. Synergies can be reached with recent work at the College in expressing general education competencies and the other recommendations in this plan to revisit College Preparatory competencies.
- Work with external audiences, chiefly employers and small businesses, to map their needs to the competencies that BCC can deliver.
- Provide the structure, professional development and support systems for faculty to engage in identification of learning competencies in their courses, the unbundling of course content tied to these learning competencies, and the reuse of this unbundled content (learning objects) in other courses, both credit and non-credit.
- Revisit learning theory, methods and principles appropriate to successful learning and student success as a lynchpin for looking at the College's curriculum
- Understand that the curricula and the individual courses it comprises cannot guarantee student success without a full scope of student support programs.
- Survey potential and existing students and faculty about scheduling options and delivery options. Interviews conducted during the master plan process indicates that students support an increased menu of afternoon and weekend offerings, two time periods during which the College has substantial capacity. Students also expressed considerable interest in expanded on-line learning alternatives. These findings should be supported by other evidence.

Success Factors

- Enrollments in blended e-learning and fully on-line courses will comprise 25 percent of BCC's student semester hours by 2015.
- Strategically selected programs and degrees will be developed for blended and fully on-line delivery to support the SSH goal above.
- Ten (10) percent increase in classes offered Saturdays and Monday through Friday in the 12 p.m. to 5 p.m. time block each year to 2015.

Goal Eight: Make strategic choices about instructional programming and resources.

Rationale: The College is in a steep growth curve and feels considerable pressure to provide consistent programming throughout the County, especially at new and planned instructional centers. There will be three new centers that will open in the southern part of the County by 2007, each of which is located no more than six miles apart. These centers are not located in close proximity to major employers limiting the opportunities to place new career and technical programs at these locations. BCC also is challenged by the number of part-time faculty with whom it contracts to deliver instruction, their participation with out-of-class interaction with students, and their relatively higher rates of turnover. BCC competes for part-time faculty with universities that are able to pay them more for essentially the same work. Combined, these forces make necessary new thinking about where courses should be deployed, who should deliver them, and whether new and existing centers should duplicate courses and programs available on the three main campuses.

Suggested Strategies

- Review admission processes for limited enrollment programs to ensure that criteria used to determine admission are highly correlated with success in the program and in the profession.
- Research commissioned by the College indicates that quality is ranked first by prospective adult students when they choose among learning alternatives and is more highly rated than either convenience (ranked 2nd) or cost (ranked 3rd).   This insight provides a general guide for structuring offerings in all locations.
- New instructional centers should not automatically become "clones" of the existing campuses. Unless unanticipated growth occurs in the immediate area around the southern county centers, or significant numbers of large employers emerge, they should be viewed as "feeder" campuses. BCC should adopt a general policy that when centers are within close proximity that second-year, or 2000-level courses should be only offered at nearest main campus or shared among centers.
- No high cost programs should be started either at centers or main campuses without substantial support from business and industry or other external sources.
- Strengthen the program review process to ensure that programs and services align with local employment needs and/or emerging national trends and to eliminate programs with a pattern of declining enrollment.
- Develop scheduling and course format options at the centers that provide for classes throughout the day and on weekends with a minimum of overlap.
- Thought should be given to placing fitness centers in new centers as a way of attracting community members and prospective students.

- Relocate Postsecondary Adult Vocational Certificate clock-hour programs and the South Campus nursing program to the new Miramar Center. Those PSAV programs that are bound in place because of equipment, including dental assisting and other health-intensive programs, would not be included. The desired outcome would be to provide visibility for these programs that is now lacking, increase coordination among program faculty, and to free up classroom space on the three main campuses.
- Increase the compensation of veteran part-time faculty who meet benchmarks established by the College. While BCC may not be able to fully compete, salary-wise, with universities for part-time faculty it can seek to retain quality, veteran part-time faculty through increased compensation and recognition.
- Grow the Honors Institute as a vehicle to elevate overall academic excellence and global awareness activities at the College. Work toward increasing private fundraising to support scholarships and travel for Honors students.

Success Factors

- Veteran and proven part-time faculty are given multi year contracts and are paid to advise students out of class. Identify an "outstanding" part-time faculty member each year and publicly recognize them.
- Use of the matrix referenced in Goal 1 (programs and the needs they meet) to strategically offer (time and place) programs and classes to maximize their enrollment potential.
- New technical programs are started with seed money from business/industry or local county or state agencies.
- Input from student advisory councils and surveys of current and prospective students are used to plan course offerings.

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