



South Carolina Commission on Higher Education

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Mr. Neal J. Workman, Jr.
Dr. Mitchell Zais

September 15, 2008

Dr. Garrison Walters, Executive Director

To:

The Honorable Marshall C. Sanford
Governor, State of South Carolina

The Honorable Glenn McConnell
President Pro Tempore
South Carolina Senate

The Honorable Hugh Leatherman
Chairman, Finance Committee
South Carolina Senate

The Honorable John Courson
Chairman, Education Committee
South Carolina Senate

The Honorable Robert Harrell
Speaker
South Carolina House of Representatives

The Honorable Dan Cooper
Chairman, Ways & Means Committee
South Carolina House of Representatives

The Honorable Robert Walker
Chairman, Education & Public Works Committee
South Carolina House of Representatives

In 2007, the General Assembly authorized a Higher Education Study Committee to develop and recommend an evolving, multi-year plan for higher education in South Carolina to meet the needs of the state as can be addressed by higher education. The Higher Education Study Committee is pleased to provide you the attached report that details the first phase on the road to a fully developed plan. The Committee transmits its report with a sense of urgency as we find higher education critical to our state's future success in the knowledge-based economy in which we are living. A focused, action-oriented statewide higher education plan is a necessary bridge to increase significantly South Carolina's competitiveness and realize a prosperous economic future and enhanced quality of life for South Carolina and its citizens.

Attached you will find our recommendations for the framework stage of our Action Plan. The Plan, which has a six-year timeframe (2009-2015), is centered on accomplishing four goals: 1) making South Carolina one of the most educated states, 2) increasing research and innovation in South Carolina, 3) making South Carolina a leader in workforce training and educational services, and 4) realizing South Carolina's potential (resources and effectiveness). The Action Plan Framework provides an essential structure by describing the goals in depth and detailing benefits, areas of potential emphasis and probable mechanisms for implementation.

As our work evolved, we realized that a successful plan requires a participatory approach and a broad understanding and support on the part of those who will make the plan work. We have included much consultation in the process to date. However, in order to develop comprehensive recommendations, we found that more was needed. Consequently, we will provide an implementation report in December that will include recommendations for the Action Plan together with details about follow-through and specific spheres of action, mechanisms to be employed to reach each goal, the required resources, and areas of responsibility for success.

Currently, we have four broadly constituted task forces at work on each goal. We expect these groups to provide us with implementation recommendations by mid-November. Once we have this work in hand we will seek public comment (through regional hearings and other channels). Our final report and recommendations will be submitted to you in December.

We appreciate the weight of our responsibility in making recommendations to you as charged and hope that you will find our progress to date satisfactory. We look forward to consultation with each of you as well as members in the General Assembly as we work to complete our charge this fall. Thank you again for this opportunity and for your wisdom in recognizing the critical need to establish a statewide higher education plan as the future of our state depends on it.

Sincerely,

A handwritten signature in cursive script, appearing to read "Daniel Ravenel".

Mr. Daniel Ravenel, Chairman,
Higher Education Study Committee

cc: Members of the Higher Education Study Committee

Mr. J. Boone Aiken, III, Esquire
Colonel Claude Eichelberger
The Honorable Jerry N. Govan, Jr.
Dr. Doris R. Helms
Mr. Scott Ludlow
Mr. Robert W. Marlowe
Layton McCurdy, M.D.
Dr. John E. Montgomery

Dr. Garrison Walters

**LEVERAGING HIGHER EDUCATION
FOR A STRONGER SOUTH CAROLINA**

THE ACTION PLAN FRAMEWORK



**A REPORT OF THE
HIGHER EDUCATION STUDY COMMITTEE**

TO

**THE HONORABLE MARK SANFORD, GOVERNOR, AND
MEMBERS OF THE SOUTH CAROLINA GENERAL ASSEMBLY**

SEPTEMBER 15, 2008

**TO BE FOLLOWED IN DECEMBER 2008 WITH
RECOMMENDATIONS FOR THE ACTION PLAN IMPLEMENTATION**

THE HIGHER EDUCATION STUDY COMMITTEE

The Higher Education Study Committee (HESC) was authorized in 2007 with the passage of Proviso 5A.28 in the FY 2007-08 Appropriations Act. The HESC was reauthorized in 2008 with the inclusion of the proviso again (Proviso 6.27) in the FY 2008-09 Appropriations Act.

The HESC includes nine members who were appointed by the Governor, the President *Pro Tempore* of the Senate, the Speaker of the House of Representatives, and the chairs of the Senate and House finance and education committees.

The members are as follows:

Mr. Daniel Ravenel of Charleston – Appointed by the Speaker of the House of Representatives, The Honorable Robert W. Harrell, Jr., and elected by the HESC to serve as Chairman.

Mr. J. Boone Aiken, III, Esquire of Florence – Appointed by Senate Finance Committee Chairman, The Honorable Hugh K. Leatherman, Sr.

Colonel Claude Eichelberger of Camden – Appointed by the Governor of South Carolina, The Honorable Marshall C. Sanford, Jr.

The Honorable Jerry N. Govan, Jr., House District 95, Orangeburg County. – Appointed by House Education and Public Works Committee Chairman, The Honorable Robert E. Walker.

Dr. Doris R. Helms of Clemson – Appointed by House Ways and Means Committee Chairman, The Honorable Daniel T. Cooper.

Mr. Scott Ludlow of Columbia – Appointed by the Governor of South Carolina, The Honorable Marshall C. Sanford, Jr.

Mr. Robert W. Marlowe of Charleston – Appointed by Senate President *Pro Tempore*, The Honorable Glenn F. McConnell.

Layton McCurdy, M.D., of Charleston – Appointed by the Governor of South Carolina, The Honorable Marshall C. Sanford, Jr.

Dr. John E. Montgomery of Columbia – Appointed by Senate Education Committee Chairman, The Honorable John E. Courson.

LEVERAGING HIGHER EDUCATION FOR A STRONGER SOUTH CAROLINA

THE ACTION PLAN FRAMEWORK

EXECUTIVE SUMMARY

The Knowledge Economy and South Carolina's Competitiveness

The foundation of the world economy is in a rapid transition from the old industrial structure—where raw materials and unskilled labor provided the keys to prosperity—to a knowledge economy in which continuous science-based innovation depends on highly educated, highly flexible and adaptive individuals. South Carolina, which is much less educated overall than the national average (and far behind the national and world leaders), must make rapid changes to become more educated or it will face a diminished economy and quality of life.

South Carolina's Strong Educational Platform

South Carolina has a strong educational platform: P-12 education is embarked on significant, well-thought out reform; the technical college system is an internationally recognized jewel; the comprehensive universities have a great reputation for quality, productivity and service; and the research universities are focused and collaborative, leveraging visionary programs like the Centers of Economic Excellence (Endowed Chairs) and other actions to create higher levels of research excellence and innovation.

A strong platform is a key asset, but it is not enough in a time of fierce national and international competition. More must be done. It was in recognition of this challenge that the Governor and the General Assembly created the Higher Education Study Committee (HESC) in 2007. The culmination of a series of planning efforts dating back to the beginning of this decade, the HESC was charged with creating an overall plan for higher education in the state.

The Concept of an Action Plan and the Four Goals

Early in its work, the HESC decided that its plan should be an Action Plan. It would be short-term; contain bold, but achievable goals; focus on the needs of the state; and assign clear responsibilities for success.

Following on the concept of an Action Plan, the HESC decided on three goals:

- Goal One – Making South Carolina One of the Most Educated States
- Goal Two – Increasing Research and Innovation in South Carolina
- Goal Three – Making South Carolina a Leader in Workforce Training and Educational Services

Later, as the HESC began to consider how to implement actions in the three goal areas, a fourth goal was added:

- Goal Four – Realizing South Carolina's Potential: Resources and Effectiveness

Process: the Action Plan Framework and the Action Plan Implementation

The HESC began meeting immediately after appointments were finished and quickly appointed Advisory Groups to investigate key areas. This work was very productive, but could not be completed in time to fully engage colleges, universities, the business community, and the public in construction and evaluation

before the September 15 deadline. As a consequence, the Action Plan has been split into two parts: the Action Plan Framework (this document—submitted on September 15) and the Action Plan Implementation (to be submitted in December).

This Action Plan Framework provides an essential structure by describing the goals in depth and detailing benefits, areas of potential emphasis and probable mechanisms for implementation. As such, it provides clear direction for higher education in the Action Plan's six-year timeframe (2009-2015). The Action Plan Implementation will complement the framework with detail about follow-through and specific spheres of action, mechanisms to be employed to reach each goal, the required resources, and the areas of responsibility for success. Four broadly constituted task forces are already at work on each of the goals; in November, draft reports from each will be circulated for public comment (including regional hearings), prior to completion of a final report in December. The HESC believes that this participatory approach is essential to achieving our goals. Words on paper are a small part of a plan; the keys to success are broad understanding and support on the part of those who will make the plan work, and the only way to achieve this understanding and support is through an inclusive process.

Goal One – Making South Carolina One of the Most Educated States

Benefits There is overwhelming evidence, nationally and internationally, that higher levels of education lead to greater prosperity and competitiveness in the knowledge economy. In this context it is a great concern that South Carolina is well short of the national average and very far behind the national leaders in the proportion of adults who hold graduate/professional and baccalaureate degrees. At the associate level, South Carolina just exceeds the national average but is well behind the leading states. South Carolina's position is especially worrisome given that the importance of higher education in wages and employability is increasing by comparison to a high school diploma at all levels (including certificates that are not formal degrees but nonetheless significant indicators of ability).

Mechanisms There are two key areas where South Carolina must work to increase its educational levels: 1) the traditional P-12 to higher education pipeline; and 2) the vast number of adults who lack degrees or advanced certificates.

The P-12 to Higher Education Pipeline There are three areas of emphasis in the P-12 to higher education pipeline: academic preparation and relevance; affordability, and aspirational access.

- **Academic Preparation and Relevance** The recent EEDA legislation, (*Personal Pathways to SuccessTM*) contains a series of reforms that should make great strides in improving preparation and relevance; this is work that builds on and complements efforts of colleges and universities with schools around the state.
- **Affordability** As a consequence of historically low levels of state support, higher education in South Carolina is very expensive for students and their families. Investments in merit scholarships have helped many parents and students pay for college, and have also helped to retain students in state. Unfortunately, our financial aid portfolio is not balanced between need and merit, with the result that many students from poor families cannot afford to attend. Yet it is precisely from these families that much of South Carolina's increased participation must come.
- **Aspiration** Many families, particularly in the poorer areas, do not really believe that college is a feasible option for their children. Raising aspirations—increasing the belief that children can go to college and succeed there— is a critical part of our effort.

Adults The adult to higher education pipeline is a critical part of the equation. Consider these numbers for those over age 25 in South Carolina: more than 500,000 people without a high school diploma; more than 900,000 with a diploma but no higher education; and more than 500,000 with some college but no degree. That's nearly two million people or close to half the state's population. Bringing a significant number of these individuals into the knowledge economy will require an array of actions such as: flexible formats, low-cost, multiple providers, no-fail competency-based testing, and certificates that build confidence and provide assurances to employers.

Productivity Inside Higher Education South Carolina is already a national leader in university graduation rates, but improvements are in everyone's interest. To achieve higher educational levels will require mechanisms to strengthen further success to graduation. Areas of emphasis will include: developmental education, more effective transfer strategies; and university-based limits of degrees to 120 credit hours where possible and appropriate.

A final way to increase educational levels will be to retain in the state as many graduates as possible while at the same time attracting graduates from other states and nations. Retaining graduates is already a strength; attracting educated outsiders is an area where much needs to be explored.

Goal Two – Increasing Research and Innovation in South Carolina

Benefits Today's economy is being driven by innovation, a very high proportion of which can be traced to knowledge creation at research universities. These institutions foster a culture of talent that benefits regions and states through attraction of business investment, creation of new businesses, sponsored federal and industrial research that creates high-value, high-paying jobs, and more.

Mechanisms South Carolina has taken great strides in research-based competitiveness through the Centers of Economic Excellence Program (endowed chairs), together with a series of well-thought-out measures such as the Research Infrastructure Grant Program, the Venture Capital Investment Act, the Light Rail fiber network, and more. The high degree of focus and very productive collaborations among the three research universities are also a powerful asset. But many states and nations are ramping up investment in research and innovation, and South Carolina will have to strengthen its existing base of activity and consider new areas of focus such as graduate stipends, incentives for technology transfer, and especially expanded infrastructure if it is to move up in competitiveness.

Goal Three – Making South Carolina a Leader in Workforce Training and Educational Services

Benefits More individuals with more education have a clear benefit to society, but those benefits can be maximized by connecting education and training to the existing and developing economy. South Carolina has a low level of labor force participation (63.8% vs. 66% nationally) with the deficit being primarily in the older population—these data support the need for an emphasis on increased education and training for adults. A systemic workforce development plan must accommodate the need to prepare a workforce sufficient both to replace retiring baby boomers (replacement jobs) and to provide a workforce for growing fields (new jobs). In addition, educational services such as arts programs, medical residencies, and professional outreach are proven to attract and retain businesses while improving the quality of life.

Mechanisms In addition to the Goal 1 mechanisms described for the P-12 and adult to higher education pipelines, workforce development training for business is an area where the state has had great success and can do more. Similarly, increased use of apprenticeships and WorkKeys certification offer the potential to help both individuals and employers. Other areas to be

considered include incentives in educational services such as medical residencies and programs in the arts.

Goal Four – Realizing South Carolina’s Potential: Resources and Effectiveness

Goal 4 seeks to make certain that adequate resources exist to make the Action Plan successful while at the same time ensuring that documented institutional effectiveness continues to be a priority for colleges and universities. South Carolina has a well-established accountability system but has not historically provided adequate funding for colleges and universities. The core of the work for this goal will be accomplished in the *Action Plan Implementation* report that will be produced in December. However, preliminary discussions suggest that the Goal 4 section of the *Action Plan Implementation* report will be organized into three key areas: 1) existing efforts in effectiveness; 2) areas where streamlined state-level management systems could produce improved results; and 3) areas where colleges and universities, singly or together, will aim for improved effectiveness.

Conclusion: Analyzing the Value of Higher Education

Higher education is both an individual and a public benefit. For individuals, advantages include higher salaries and benefits, more stable employment, improved working conditions, improved health/life expectancy, and more. For the public, advantages include increased tax revenues (therefore increasing the potential to keep taxes low), reduced need for government support, reduced crime, and more. A recent comprehensive study in Texas, undertaken by a private firm specializing in econometric analysis, compared the state’s progress with normal increases in education to its progress with the numbers projected in the new higher education plan (similar to what we are working on). The results are huge increases in jobs, annual state gross product, and personal income. The investments needed to support the plan would be repaid 8:1 over the life of the plan—and that’s just for the state, it doesn’t include benefits to individuals.

Many Americans continue to believe that a high school diploma and on the job training is enough for success in the knowledge economy, but the facts show otherwise. Low-skill jobs are being moved to other countries or replaced with technology, and the evidence suggests this trend is accelerating.

It’s also the case that, if South Carolina chooses not to act boldly in higher education, it will slip much farther behind economically than it is now. Most of the less-educated states have very aggressive plans to sharply increase educational levels (e.g. Texas, Kentucky, Oklahoma, Ohio) while already highly educated states such as Massachusetts and New Jersey are making higher education a greater priority. At the same time, the United States, the world’s higher education leader in 1980, has now been surpassed by a number of countries in Europe and Asia.

South Carolina must become one of the most educated states, increase research and innovation, and increase workforce development and educational services if it wants to avoid being the equivalent of a third world country inside the United States. The good news is that competing in higher education will produce almost immediate benefits – returns on investment that will quickly pay off the initial required funding as well as improve the state’s quality of life over the long term. The *Action Plan Implementation* report, to be released in December will provide more details.

LEVERAGING HIGHER EDUCATION FOR A STRONGER SOUTH CAROLINA

THE ACTION PLAN FRAMEWORK

INTRODUCTION: THE ACCELERATING IMPORTANCE OF HIGHER EDUCATION

The bottom line at the beginning: The world economy has changed from one based on labor and natural resources to one that is focused on knowledge. South Carolina, which already lags the national average in higher education, must make significant and rapid changes if it wants to compete in the knowledge economy.

Education has always been a critical factor in economic development. As far back as the beginning of the twentieth century, the United States, largely in response to demands from employers, began raising the required number of years of schooling. The expectation stood at about the 9th grade in 1900 and had gradually reached that of a high school diploma by around 1940. Economists believe that this rapid increase in educational levels was the principal source of the United States' world-leading economic growth during the first seven decades of the twentieth century.¹ The initial stage of education-fueled economic growth came from additional years in high school, while the higher education stage began with the G.I. bill. To illustrate, a Congressional analysis of the World War II version of the G.I. Bill showed that over 35 years to 1979 greater higher education levels increased economic output by nearly \$294 billion and federal tax revenues by \$105 billion—a return on investment of just under 7:1.²

In about 1980, the economy again changed radically. A sharp decline in manufacturing employment and the equally rapid rise of the service sector resulted in declining demand for unskilled workers. The wages of those with college education, already relatively high, began to pull away from those with only a high school diploma.

RADICAL CHANGES IN THE ECONOMY

In 1980, the industrial city of Youngstown, Ohio had a per capita income that was 3% higher than Austin, Texas. By 2000, Austin, now a knowledge economy leader, had a per capita income 25% higher than the fading industrial-era Youngstown.

Another factor surged to prominence as the “knowledge economy” replaced the traditional natural resources/unskilled labor-intensive manufacturing economy: science-based innovation. Technology has been a key factor in economic growth since the rise of the first textile mills in the eighteenth century. But beginning in the 1980s, as new electronic tools such as the laser were combined with cheap computational power, a much faster rate of technological change began to diffuse throughout society—especially in the United States. As the most educated major country in the world at that time, the U.S. had an abundant supply of scientists, managers and technicians needed to translate new knowledge into products and services.

¹ Goldin, Claudia and Katz, Lawrence F. (2008). *The Race between Education and Technology: The Evolution of U.S. Educational Wage Differentials, 1890 to 2005*. Cambridge, Massachusetts: Harvard University Press.

² Subcommittee on Education and Health of the Joint Economic Committee. (1990). A cost-benefit analysis of government investment in post-secondary education under the World War II GI Bill,” December 14, 1988, in *The Future of Head Start*. Washington, D.C., Government Printing Office. (Numbers adjusted for inflation to 2008 dollars.)

The increasing importance of technology in economic growth took basic and applied research—already a significant factor in post-World War II change—to even higher levels of importance. Continuous science-based innovation has become not just an advantage but an expectation in broad sectors of the economy since about 1990.

The changing technological landscape has also led to a revolution in workforce training. Fifty years ago, skilled workers were usually trained on the job and rarely needed retraining. Today, employers expect at a minimum college-level preparation (certificate or degree) and the content of that education no longer centers only around specific skills but instead also focuses on the ability of an individual to learn continuously.

A final point about technology-fueled economic growth, one that is given relatively little attention, is the clustering of talent. The Harvard economist Michael Porter notes that historically businesses working in the same area tend to cluster together—for example automobiles in Detroit and semiconductors in the San Francisco Bay area—and that this clustering produces economically positive results as businesses share services, resources, and knowledge. Porter’s work is the foundation for *New Carolina*, South Carolina’s acclaimed Council on Competitiveness.³

Clustering is a factor in the knowledge economy in two ways. First, where knowledge is central, talent attracts. To illustrate, the founders of Google came to Stanford from Michigan and Maryland because of the exceptional quality of that university’s doctoral program in computer science. When they started their business, they could have gone anywhere since it is one with negligible requirements for raw materials or specialized resources. However, they chose to establish their headquarters in a highly congested, high-cost of living, and high-tax area of the country. Why did they do that? The answer is simple: talent. Google requires talented people and the universities in the Bay Area are a powerful supplier. There are a great many similar examples of the role of talent in the knowledge economy. For knowledge-based companies, the old real estate adage, “location, location, location,” is now “education, education, education,” a change that explains why twentieth century advantages such as low-taxes, natural resources, and availability of unskilled labor have little impact on twenty-first century economic development.

The clustering factor is true for people in general as well as for businesses. Educated people want to live in communities with other educated people where they seek good schools as well as an array of amenities that includes in particular a strong arts community.⁴

³ Porter, Michael E. and the Monitor Company Group, L.P. (2003) “South Carolina Competitiveness Initiative, Phase 1 Presentation.” Columbia, South Carolina; Porter, Michael. E. (2005). *South Carolina Competitiveness Initiative: A Strategic Plan for South Carolina*. Information on *New Carolina*, South Carolina’s Council on Competitiveness is available at www.NewCarolina.org.

⁴ Florida, R. (2002). *The Rise of the Creative Class and How It’s Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books.

The lessons of the knowledge economy and the accelerating importance of higher education have been learned. California and Massachusetts are the most frequently cited examples of sci-tech based growth, but South Carolina's neighboring states are in many ways better examples. In 1960, South Carolina's per capita income was 48th in the U.S., and North Carolina and Georgia were ranked 45th and 42nd respectively. In the subsequent four decades those latter two states emphasized higher education as a cornerstone of their economic development strategies, with the result that in 2007, North Carolina had risen to 36th and Georgia 38th. South Carolina, which did not make higher education a priority in that time, ranked 47th in 2007.⁵ It is no wonder that many states, most visibly Kentucky, are widely following the North Carolina and Georgia examples in using higher education as a vehicle for economic transformation.

THE SUCCESS OF OUR NEIGHBORS	
1960: per capita income in the old economy	
	Georgia-42 nd in the U.S.
	North Carolina-45 th
	South Carolina-48 th
2007: after higher education focus in Georgia and North Carolina	
	Georgia-38 th
	North Carolina-36 th
	South Carolina-47 th

As South Carolina looks to its economic future it needs to be reasonable but bold. Fortunately, there is a very strong educational foundation: South Carolina's P-12 is embarked on significant, well-thought out reform; the technical college system is an internationally recognized jewel; the comprehensive universities have a great reputation for quality, productivity and service; and the research universities are focused and collaborative, leveraging visionary programs like the Centers of Economic Excellence (Endowed Chairs) and other actions to create higher levels of research excellence and innovation.

A strong platform is a key asset, but it is not enough in a time of fierce national and international competition. The conclusion to this report will describe what will happen if we don't act, but for now it is important to appreciate that a reasonable but bold higher education plan is absolutely essential—a tepid response to the knowledge economy is an effective guarantee of third-world status.

In recognition of these circumstances the Governor and General Assembly created the Higher Education Study Committee.

The Higher Education Study Committee

The Higher Education Study Committee (HESC) was authorized by the SC General Assembly with the passage of a proviso in June 2007. The HESC's broad charge is to develop and recommend an evolving, multi-year statewide strategic plan for higher education in South Carolina (more background on this and previous planning is provided below).

⁵ Bureau of Economic Analysis. Table SA1-3: Per capita personal income tables at the state level. Data extracted from online resource at www.bea.gov.

After nearly a year of consultations with leaders and citizens of South Carolina, the HESC has responded to its charge with this document, *The Action Plan Framework: Leveraging Higher Education for a Stronger South Carolina*. The HESC's work has been informed by initiatives on higher education leading up to this report, current initiatives to increase South Carolina's competitiveness such as the work of Dr. Michael Porter that led to the establishment of *New Carolina*, South Carolina's Council on

THE ELEMENTS OF AN ACTION PLAN

- Specific actions and defined results
- Clearly connected to the needs of the state
- Short-term
- Clear assignment of responsibilities for success

Competitiveness, and the on-going work of *New Carolina* and other statewide efforts. Many individuals from within state government, higher education, business, and the community at-large have contributed to the development of the HESC's proposed plan. The recommended Action Plan Framework and Action Plan Implementation details that are currently under consideration are advanced not in isolation but in keeping with on-going efforts to improve South Carolina's economic health and the quality of life for its citizens as can be enhanced by higher education. As described below, the success of the Action Plan for Higher Education is dependent on a comprehensive approach inclusive of the full spectrum of higher education in South Carolina, the executive and legislative branches of government as well as business and the community.

Why an Action Plan?

The traditional state approach to higher education is to produce a strategic plan, a comprehensive document that proposes the direction the colleges and universities should take over the long term, usually ten to twenty years or more.

In addition to very long-term thinking, two other characteristics of traditional strategic plans are: 1) an emphasis on abstract goals that describe the benefits of higher education in a fairly generic fashion (e.g., more graduates equals more earnings); and 2) a vague approach to implementation—numbers (if set at all) are given in a statewide aggregate that leaves methods for follow-through as well as responsibilities for success unclear.

The HESC does not believe that the traditional strategic plan approach would work well for South Carolina in its current situation. The need to make better use of higher education to improve the state's economy and quality of life is urgent. South Carolina requires a clearly focused plan, one that directly connects higher education's activities to the needs of the state and that also describes specific mechanisms, measures, resources and— most important— *responsibilities* for success.

The Critical Importance of an Inclusive Process to a Successful Plan

Another critical element of a successful plan is how it is created. A plan – even a carefully focused action plan – that is developed and promulgated in isolation will fail. It will not be possible to complete a major undertaking, one that will require hard work and commitment

from a broad array of individuals and institutions across the state, if those individuals and institutions are not intimately involved in the plan's creation as well as in its implementation.

The HESC has consulted widely about the four goals that are described below and believes that, in their broad outlines, these are the best and most appropriate goals for South Carolina. As a consequence, the HESC provides this report to the Governor and General Assembly with high confidence about the proposed direction. The HESC is equally certain, however, that this first stage report must be accompanied by further consultation and discussion before we can have the kind of broad public consensus that will make the Action Plan achievable. Accordingly, we will follow this Action Plan Framework with an Action Plan Implementation report that will be completed by mid-December of this year.

To ensure that the Action Plan Implementation has all of the characteristics necessary for success, and to address the General Assembly's mandate for a plan that will "meet the needs of the state as can be addressed by higher education," the HESC will follow these stages of work:

- 1) The HESC and the Commission on Higher Education (CHE – which will be responsible for overall coordination of plan implementation and evaluation) will seek public comment on this report. The purpose will be to gauge reaction to this report and to inform development of the Action Plan Implementation.
- 2) Concurrent with this consultation, the task forces that are already at work on providing detail for each of the four goals will continue their efforts. They will have final drafts of their sections of the Action Plan Implementation completed by mid-November. These will be combined into a draft Action Plan Implementation report.
- 3) The HESC and the CHE will meet with the public in communities around the state to discuss the draft Action Plan Implementation report. Ideas and suggestions from these meetings will be directed to the HESC and its task forces in time for incorporation into the final Action Plan Implementation report by mid-December.

It is also important to note here, that in developing the recommended plan and responding to the charge of the General Assembly to review certain aspects of higher education, the HESC sought advice from a variety of constituencies. Early in the process, the HESC appointed a series of advisory committees chaired by HESC members to review the following areas as outlined in the charge including: institutional missions, academic programs and planning; enrollment; funding and institutional cost; buildings, facilities and information technology; organization and plan implementation; and scholarships and grants. The work of these advisory groups served to inform the development of this report and will also be instrumental in the development of the recommended Action Plan Implementation this fall.

BACKGROUND

South Carolina has a long tradition of planning and accountability for higher education. However, a current, accepted comprehensive statewide higher education plan is not in effect. Leaders in the state have agreed that such a plan is necessary, and the following describes how the process to create one has developed.

The Creation of a Higher Education Study Committee and Its Charge

The authorization of the present Higher Education Study Committee grew largely out of recent recommendations of a Governor's Executive Order (2006-01) Task Force on Higher Education that met from April through September of 2006. The Governor's Task Force found that "the evidence overwhelmingly supports that many of the issues surrounding higher education are the symptoms of a pressing need to coordinate activities through a comprehensive statewide strategic plan for higher education." The Task Force recommended that the Governor and General Assembly take action together to commission a statewide strategic plan for higher education in South Carolina that addresses state needs as can be addressed by higher education.

During the 2007 legislative session, the General Assembly approved a proviso in the Appropriations Act for FY 2007-08 to create such a committee. They charged the new Higher Education Study Committee (HESC) with the mission of developing and recommending an evolving, multi-year statewide strategic plan for higher education in South Carolina to meet those needs of the state as can be addressed by higher education. The General Assembly tasked the HESC with reviewing the current higher education mission and goals, taking into account the September 2006 report of the Governor's Executive Order Task Force, and also with reviewing all state-supported higher education scholarship and grant programs. Upon completion of its review, the HESC was charged with submitting its recommendations to the General Assembly. The recommendations were initially set to be delivered in February 2008; however, during the 2008 legislative session, the deadline was extended to September 2008.

The HESC's Membership

The HESC includes nine members who were appointed by the Governor, the President *Pro Tempore* of the Senate, the Speaker of the House of Representatives, and the chairs of the Senate and House finance and education committees. The appointments as listed below were made by September 2007, at which time the work of the HESC commenced.

Mr. Daniel Ravenel of Charleston – Appointed by the Speaker of the House of Representatives, The Honorable Robert W. Harrell, Jr., and elected by the HESC to serve as Chairman.

Mr. J. Boone Aiken, III, Esquire of Florence – Appointed by Senate Finance Committee Chairman, The Honorable Hugh K. Leatherman, Sr.

Colonel Claude Eichelberger of Camden – Appointed by the Governor of South Carolina, The Honorable Marshall C. Sanford, Jr. Mr. Eichelberger also served on the Governor’s Executive Order (2006-01) Task Force on Higher Education.

The Honorable Jerry N. Govan, Jr., House District 95, Orangeburg County. – Appointed by House Education and Public Works Committee Chairman, The Honorable Robert E. Walker.

Dr. Doris R. Helms of Clemson – Appointed by House Ways and Means Committee Chairman, The Honorable Daniel T. Cooper.

Mr. Scott Ludlow of Columbia – Appointed by the Governor of South Carolina, The Honorable Marshall C. Sanford, Jr. Mr. Ludlow also served on the Governor’s Executive Order (2006-01) Task Force on Higher Education.

Mr. Robert W. Marlowe of Charleston – Appointed by Senate President *Pro Tempore*, The Honorable Glenn F. McConnell.

Layton McCurdy, M.D., of Charleston – Appointed by the Governor of South Carolina, The Honorable Marshall C. Sanford, Jr.

Dr. John E. Montgomery of Columbia – Appointed by Senate Education Committee Chairman, The Honorable John E. Courson.

THE PROCESS – GETTING TO AN ACTION PLAN

In meeting its charge, the HESC has followed a process and timeline consistent with that used by other states in higher education planning. The HESC began its work with a review of the current higher education mission as set forth in Section 59-103-15 of the 1976 South Carolina Code of Laws, as amended, by taking into consideration five areas addressed in the September 2006 report of the Governor’s Executive Order (2006-01) Task Force on Higher Education. After several meetings, the HESC identified three preliminary, overarching goal areas including: (1) South Carolina to rank in the top of states in educational levels; (2) South Carolina to rank in top of states in sponsored research and related measures of innovation; and (3) South Carolina to rank in top of states in workforce development and educational services.

Once the initial goals were determined in late fall 2007, the HESC then appointed advisory groups to better inform its work to refine the goals and to assist in meeting the General Assembly’s charge to the HESC that it develop a plan that includes, but is not limited to, certain aspects of higher education as recommended by the Governor’s Task Force. The six advisory groups that were established along these lines – (1) Organization and Plan Implementation; (2) Institutional Missions and Academic Programs and Planning; (3) Enrollment; (4) Funding and Institutional Cost; (5) Buildings, Facilities and Information Technology; and (6) State-

Supported Scholarships and Grants – met throughout the fall and early winter. The advisory groups were chaired by members of the HESC and included participation from within higher education, the business community, the General Assembly, and the community at large. A listing of the members is found in Appendix A. By February the groups returned reports to the HESC. The HESC greatly appreciated the work of these initial advisory committees. Their recommendations have been shared with institutional presidents and will be considered in upcoming months as work is completed in developing detailed implementation plans for achieving the identified statewide action goals.

Following the work of the advisory groups and vetting of the information by the HESC and with stakeholders such as the Presidents of the State’s Public Colleges and Universities, the HESC continued to meet and shape its recommendations for an Action Plan. In June 2008, the HESC affirmed four primary working goals of the Action Plan – (1) making South Carolina one of the most educated states, (2) increasing research and innovation, (3) making South Carolina a leader in workforce training and educational services, and (4) realizing South Carolina’s potential: resources and effectiveness – and agreed that the recommended Action Plan would be focused on a six-year period beginning July 2009.

To complete its work, the HESC made plans to release a September report to provide a framework and overall description of the recommended goals and types of mechanisms and resources for achieving the goals. The HESC also decided that in order to develop the necessary implementation details for accomplishing the goals, additional work needed to occur over the summer and fall. To conduct this work, the HESC created four *ad hoc* work groups, each focused on one of the goals, to assist in developing the implementation details and to ensure broad input so that the recommended Action Plan is connected to the needs of South Carolina. Presently, these *ad hoc* work groups are meeting. Again, there is broad representation on these groups including representatives from the state’s public and independent colleges and universities, the State Chamber, *New Carolina*, the Department of Education, the Department of Commerce, the SC Research Authority, and the Arts Commission.

Before issuing its final recommendations, the HESC plans to seek statewide input by holding a series of hearings across the state. The final report, complete with implementation details, will be released in December.

The sections that follow provide detail about each of the four goals as they stand today.

THE GOALS OVERVIEW

The HESC believes that goals for higher education have both an internal (to higher education) and an external (for the public) dimension. As such, it will be important to keep the number of goals small and ensure that their connection to the needs of the state is clearly understandable.

Goal One – Making South Carolina One of the Most Educated States

What are the Benefits of Increasing Educational Levels?

The Introduction to this report has described the imperative for increased educational levels in today's knowledge economy. To reiterate, increased educational levels provide benefits not only to the individual but also to the state. Higher education levels have been shown to positively correlate to higher wages for individuals and to lower poverty rates, lower unemployment, and less dependence on social programs – translating to increases in tax revenues and decreases in the demand on the state's budget. As an added societal benefit, higher education levels correspond to high levels of civic participation including volunteerism, voting and even blood donation.⁶ A quick look at each of the degree levels, with information about how South Carolina stands in each, will provide further detail.

SOUTH CAROLINA'S EDUCATION DEFICITS
*Persons 25 years and over**

	SC	vs. U.S.	vs. Leader
Graduate/Professional	7.9%	9.9%	15.7% (MD)
Baccalaureate	14.9%	17.1%	22.0% (CO)
Associate	7.9%	7.4%	11.2% (ND)
Overall educated adults (Associates and above)	30.6%	34.4%	44.7% (MA)

**2006 American Community Survey, US average for 50 states.*

What Educational Levels are Important?

South Carolina is largely an importer of college educated talent relative to the numbers of college degrees awarded.⁷ While bringing in necessary human capital helps meet the current needs of our economy, South Carolina must advance at every degree level (as well as in workforce development—See Goal 3) to remain competitive and afford better opportunity for its citizens. According to a 2003 report, *Foundations for the Future: Higher Education in South Carolina*,⁸ South Carolina has significant deficits in the educational levels necessary for successful life and work in the 21st century; the report also notes significant disparities by race and gender as well as in rural and urban populations. The report concluded that “South Carolina

⁶ Baum, S. and Ma, J. (2007). Trends in higher education series: Education pays 2007, the benefits of higher education for individuals and society. The College Board.

⁷ Jones, D. and Kelly, P. (2007) The emerging policy triangle: Economic development, workforce development and education. Updated profiles for all 50 states and including international comparative data.” NCHEMS and WICHE supported by a grant from the Ford Foundation.

⁸ McGuinness, A. and Novak, R. (2003) Foundations for the future: Higher education in South Carolina. A report prepared by the NCHEMS and the AGB's Center for Public Trusteeship and Governance.

must significantly increase the percentage of younger citizens who complete secondary education and are prepared for postsecondary education and/or employment in a knowledge-based economy.

Graduate/ Professional

The graduate/professional area is one of the fastest growing in the U.S. economy overall and a significant national shortage of individuals at these levels is evidenced by the fact that average salaries for holders of graduate and professional degrees have been pulling away from those of workers with lower educational levels for some time. In 2005, the median earnings of full-time, year-round workers ages 25 and older for those with master's degrees were almost twice as much, and for those with professional degrees over three times as much, per year as compared to the earnings of high school graduates.⁹

The major reason for increased demand for graduate/professional degrees is the fact that advanced abilities and knowledge are becoming a required entry point for many professions. This is especially pronounced in health care, where the entry-level degree in Pharmacy, Physical Therapy, and Audiology has moved to the doctorate. Demand for physicians is soaring in almost every specialty area. Although not formally required, professionals in areas such as business and engineering are typically expected to complete a Master's Degree soon after beginning employment. Teachers, also, are usually expected to undertake an advanced credential early in their careers.

South Carolina lags behind other states in its percentage of citizens who are graduate and professional degree holders: the U.S. average percentage is 9.9% in comparison to 7.9% in South Carolina for a state rank of 37.¹⁰

Baccalaureate

Holders of the traditional college degree, the baccalaureate, are the ones who provided the United States with an early lead in the knowledge economy. Professional areas such as business, education, engineering, and nursing form the essential core of employment for a series of employment sectors that are essential to the economy. Graduates in sciences typically go on to graduate work, while those with degrees in the arts, humanities, and social sciences provide the bulk of entrants to law and other professional areas. The versatility of arts, humanities and social sciences graduates is demonstrated by their significant presence as managers and developers in the rapid advance of information technology in the United States.

South Carolina also trails other states in those holding only a baccalaureate degree: the U.S. average percentage is 17.1% in comparison to 14.9% in South Carolina for a state rank of 39.¹¹

⁹ Baum, S. and Ma, J. (2007).

¹⁰ U.S. Census Bureau, American Fact Finder, *American Community Survey, 2006*. Census population and educational attainment statistics for adults 25 years and over. Data extracted from online resource www.factfinder.census.gov.

Associate

The Associate Degree is a rapidly developing and increasingly critical component of higher education. There are two basic types of associate degrees: applied and transfer. Applied degrees are principally in technology (e.g., engineering, information sciences), the industrial trades (e.g., HVAC, automotive, construction), and medical areas (e.g., nursing, radiologic technology) and do include significant general education (the common core of liberal arts courses all students are required to take in earning a baccalaureate degree). Associate degree programs provide the theoretical knowledge that is essential to ensure that graduates are able to adapt to fast changing technological developments. Holders of applied degrees typically enter the workforce directly after graduation, although many programs (e.g., nursing) offer the possibility of continuation to a baccalaureate degree.

The transfer degrees (Associate of Arts and Associate of Science) are aimed at students who intend to move to a university after two years of study or even earlier. The option of beginning a baccalaureate degree at a technical or two-year college is a widely available option for students who can benefit from the lower tuition, geographic proximity and/or housing costs of a local college.

While South Carolina produces a similar percentage of associate degree holders on average as the nation (7.9% SC as compared to 7.4% US in 2006)¹², South Carolina needs far more of its students to transition through the pipeline and earn increased degrees at all levels including the Associate—this will become especially important as the *Personal Pathways to Success™* effort (see below) is implemented and provides more students with information and preparation for careers. Again, it will take a comprehensive approach to significantly increase educational levels in South Carolina, particularly given our low starting point in terms of the percentage of South Carolinians with bachelor's degrees and higher. Increasing the numbers with at least an associate's degree is but one step toward our overall success.

Certificate

The higher education certificate, which ranges from pre-associate through post-graduate, is an extremely important achievement that is often overlooked but is sharply increasing in importance. Although certificate programs at all levels vary in length and content, they are typically focused on a specific application area (e.g., air conditioning repair; health communication; historic preservation; entrepreneurship; and English as a second language) and last for a year or less. Many certificates fall into the area of professional development, and are often a requirement for individuals in fields such as health and business/ finance. Certificates are highly valuable because, on the one hand, they allow concise programs that give individuals quick entry into the job market while on the other hand they often provide content that can be applied to a degree program. Certificates, because they are short-term and focused, have the potential to be a key factor in drawing more adults into higher education.

¹¹ U.S. Census Bureau.

¹² U.S. Census Bureau.

Given the lack of standardization in certificates, it is not possible to compare South Carolina's levels to those of other states. It is certain, however, that increased access to certificates – whether pre-associate, pre-baccalaureate, post-baccalaureate, or post-masters – will be an essential part of an effective strategy for making our state competitive in the knowledge economy.

What Disciplines (Academic Areas) are Important to South Carolina?

In examining South Carolina's business environment, Dr. Michael Porter cited concerns about relatively few advanced degree holders in science and engineering and a limited supply of skilled labor such as technicians and advanced metal workers.¹³ While the specific designation of priority degree areas will be identified in the Action Plan Implementation report, areas of expected emphasis include: science and technology; engineering; medical, nursing, and allied health fields; and education. In the Implementation report, colleges and universities will first individually, then as a group, determine how each can best contribute to meeting statewide needs. Colleges and universities will then set institutional goals and outcomes measures, by discipline, degree level, and other relevant factors. Fulfilling these plans will, of course, be dependent on adequate resources. The contributions of both public and private colleges and universities will be taken into consideration.

What Mechanisms Will South Carolina Use to Increase Education Levels?

South Carolina's effort to increase overall educational levels will require sustained work in at least four distinct areas.

The P-12 to Higher Education Pipeline

Higher education can only be as successful as the communities and schools that provide the overwhelming bulk of its entering students. South Carolina has made some significant recent

CHANCE FOR COLLEGE

South Carolina ranks 48th among the states in the percentage of 9th graders who will graduate from high school in four years and then directly enter higher education.

reforms in P-12 education, and these are expected to improve the state's high school graduation rate, which has historically been among the lowest in the country. South Carolina does rank well nationally in the percentage of high school graduates who go directly to college (4th)¹⁴ but this figure is deceptive because of

the low high school graduation rate. A better measure of our state's status might be the "Chance for College," a metric that calculates the percentage of ninth grade students who will finish high school within four years and go to college immediately after high school. The U.S. average on this measure is 38%, and South Carolina, at 29.4%, ranks 48th.¹⁵

¹³ Porter, Michael. E. (2005). South Carolina competitiveness initiative: A strategic plan for South Carolina.

¹⁴ The National Center for Public Policy and Higher Education. 2004 College Going Rates of High School Graduates – Directly from High School as extracted from <http://www.higheredinfo.org>.

¹⁵ The National Center for Public Policy and Higher Education. (2006). *Measuring Up 2006: The National Report Card on Higher Education*. Chance for college by age 19 as based on Thomas Mortenson's "Chance for College by Age 19 by State in 2002."

There are three key areas that must be emphasized to improve the productivity of the P-12 to higher education pipeline. These are often known as the “three As”: Academic Preparation; Affordability; and Aspirational Access. Each is described briefly here.

- **Academic Preparation and Relevance**

Students who are academically poorly prepared for college have a sharply diminished chance of success in the event that they do choose to go on. In 2005, South Carolina passed the Education and Economic Development Act (or EEDA)¹⁶, also referred to as *Personal Pathways to Success™* (see also information under Goal 3). The impetus for the legislation was the realization that education – specifically a rigorous and relevant secondary education directly linked to postsecondary opportunities – plays a critical role in driving the economic prosperity of the state. *Personal Pathways to Success™* empowers youth and adults by making a rigorous education relevant to their aspirations and abilities, promising a better economy and quality of life for everyone in South Carolina¹⁷.

Many changes have been brought about by the Education and Economic Development Act and *Personal Pathways to Success™*. At the postsecondary level, these include addressing articulation agreements to provide seamless pathways for adequately prepared students to move from high school directly into higher education; recommending dual enrollment coursework that is acceptable statewide for transfer within a related course of study; and examining the content and rigor of high school courses in order to provide seamless pathways to postsecondary education. Other strategies for increasing the rigor of high school preparation are also being explored and attention is being paid to course selection patterns, earlier assessment and diagnostic strategies, and continuing the expansion of the Advanced Placement (AP) and International Baccalaureate (IB) programs.

South Carolina’s colleges and universities are also working actively with schools to improve the academic preparation of students through a variety of other initiatives. For example, they are engaged in a statewide project which will align high school and college courses more closely in English, science, and mathematics in order to strengthen student preparation and enhance opportunities for success in college. Postsecondary institutions are also deeply engaged with P-12 through the *Centers of Excellence in Teacher Education* and the *Improving Teacher Quality* programs which work with schools and districts directly to enhance student learning and teacher preparation.

Other noteworthy programs such as Clemson University’s *Emerging Scholars Program*, Denmark Technical College’s *High School to College Transition*, and the College of Charleston’s *Center for Partnerships to Improve Education* are making higher education a reality for students who have not seen college in their future. For example, Clemson’s *Emerging Scholars*

¹⁶ S.C. General Assembly. (2005, May 27). 116th Session, H3155, South Carolina Education and Economic Development Act. Retrieved, August 25, 2008, from http://www.scstatehouse.net/sess116_2005-2006/bills/3155.htm.

¹⁷ *South Carolina Personal Pathways to Success*. (2008). Retrieved August 21 2008, from <http://www.palmettopathways.org/EEDA2/default.aspx>.

Program aims to enhance South Carolina's economic prosperity by increasing the number of college graduates who come from economically disadvantaged areas and first generation college-going families. Through this program, students are taught that knowing the basics in reading, writing and math are the most important factors in high school and college completion. These skills are then emphasized throughout their participation in the program and more information is provided on how to apply to any college or university. Even though the students attend summer sessions on the campus of Clemson University, college attendance is not limited to Clemson. The students are encouraged to apply and attend any college of their choice with an emphasis on schools in the state of South Carolina.

Other ongoing initiatives in South Carolina are focused on preparing greater numbers of students to move successfully through the education pipeline to greater levels of educational attainment. The following names just a few of the many noteworthy programs: participation by South Carolina's technical colleges in the national *Achieving the Dream* project; SC GEAR UP (or *Gaining Early Awareness and Readiness for Undergraduate Programs*), a federally funded six-year grant with a focus on improving college access, preparation and attendance for low-income South Carolina students; HEAP (or *Higher Education Awareness Program*), a state funded higher education awareness program that serves eighth graders across the state through the provision of college awareness activities; and the *College Access Challenge Grant*, a federally-funded, two-year grant with emphasis on education and activities relating to increasing college access for low-income first generation college-going students. South Carolina also actively participates in *College Goal Sunday*, a program funded by the Lumina Foundation to assist students and their families in completing the Free Application for Federal Student Aid (FAFSA).

At the secondary level, the EEDA stipulates that by 2010, all South Carolina high schools must be organized by *High Schools That Work*, or a comparable model. Additionally, Regional Education Centers (or RECs) are being created across the state to help connect students and educators with the business community in order to align students' post-graduation goals with the knowledge and skills needed for real-world success (see also Goal 3 below) by facilitating the delivery of information, resources and services. Connecting the school-aged population and adults to accurate information about careers, occupations, businesses and industries that exist locally or regionally can aid adults as they seek employment or training to gain employment and can aid students as they explore and consider future career and postsecondary opportunities.

Other important components of the EEDA reforms currently underway in South Carolina include efforts to improve the relevance of education to secondary students by ensuring significant access to career information beginning in elementary school; providing the opportunity for every high school student to develop an individual graduation plan with the participation of parents or guardians so that the curriculum taken aligns with the student's goals and aspirations; and ensuring access to career oriented experiences and coursework while in high school and creating a more seamless transition between high school and college.. This alignment can be quite effective since the majority of higher education students in South Carolina (80.8% of all higher education students and 83.1% of all public higher education

students)¹⁸ are residents of the state and will benefit from the improvements initiated by *Personal Pathways to Success*TM. The legislation intends that *Personal Pathways to Success*TM will result in a higher high school graduation rate, a greater college-going rate, less remediation of college students and eventually increased college graduation rates.

The changes brought about by the statewide implementation of the EEDA and by locally-focused initiatives should, as noted above, improve the quality of preparation of students graduating from South Carolina high schools. Success will not automatically flow from a plan, however, and sustained work with the schools will continue to be necessary. Higher education's work with the schools in academic preparation will need to increase and to be more highly coordinated as we move forward with the Action Plan. These activities are time consuming and will require additional resources if we are to be successful.

- **Affordability**

State investment in colleges and universities provides not just a individual good but, more importantly, a public good by ensuring an educated, participatory citizenry. However, in recent years, we have seen declining state support and rising college costs, resulting in many students, particularly low-income students, becoming discouraged from pursuing a college degree. According to the latest national report card, *Measuring Up 2006*, students and families are devoting an increasing share of income to meet college costs as more states than ever are falling behind on measures of affordability. South Carolina is no exception. Since 1992, the share of S.C. family income, even after financial aid, required to pay for college has risen from 22% to 27% at community colleges, 28% to 36% at public 4-year colleges and 48% to 60% at private colleges.¹⁹

State support for core educational and general funding for S.C.'s public colleges and universities has declined. Today state operating funds are lower in actual dollars than in FY 2000-01. In addition, state bond funds for education and general capital projects have not been made available over the past ten years. The result has been increased tuition and fees at our public colleges and universities to meet needs and growing costs and to keep pace with growing enrollments. Data from a report by the College Board, *Trends in Pricing, 2007*, reveal South Carolina's tuition for four year public colleges ranks among the highest in the nation (8th).²⁰ South Carolina's poor standing in affordability is in part a consequence of comparatively low state support (38th in state expenditures per full-time equivalent student).²¹

Fortunately for many of our students, South Carolina has made considerable investments in college scholarships and grants for more than a decade. The investments have largely been in merit-based academic scholarships, which have been successful in encouraging our students to

¹⁸ South Carolina Commission on Higher Education. (2008). CHEMIS enrollment data and calculation. Data extracted from http://www.che.sc.gov/New_Web/Rep&Pubs/DataRepts.htm.

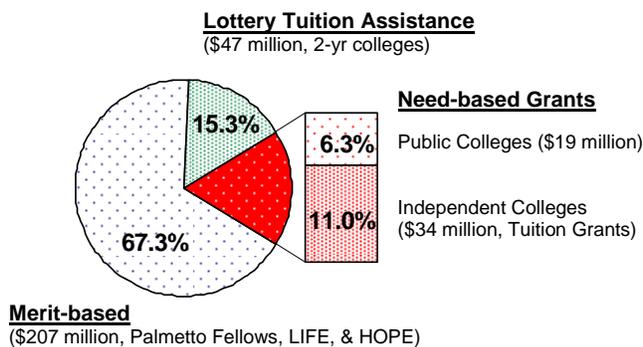
¹⁹ The National Center for Public Policy and Higher Education. (2006).

²⁰ Baum, S. and Ma, J. (2007).

²¹ State Higher Education Executive Officers. (2008). State Higher Education Finance (SHEF), FY 2007 in current dollars. A project of the staff of the State Higher Education Executive Officers (SHEEO).

work harder to excel in high school and college studies and to attend college in South Carolina. Also, more students are staying in South Carolina after college: a recent report by the Commission on Higher Education demonstrates that considerable numbers of the students earning academic scholarships remain in state after graduation.²² However, as tuition has risen, the state's merit-based scholarships have lost ground as to the percentage of tuition and fees once covered and need-based aid funds, which have remained stagnant over the past several years, are not sufficient to assist in meeting the needs of low-income students. For our state's students and their families, the result has been twofold; an increasing number of students find postsecondary education beyond reach and there is an increasing burden on family income with much of the burden being met through loans.²³

**SC Undergraduate Scholarships & Grants
FY 2008-09 Appropriations**



South Carolina's generous support of merit-based scholarships has left our student aid portfolio unbalanced. While South Carolina ranks first on the estimated scholarship and grant dollars provided per full-time undergraduate enrollment, the available state aid in South Carolina, unlike many states, is heavily weighted toward the merit-based academic scholarships.²⁴ For FY 2008-09, there is approximately \$307 million in state general and lottery funds appropriated for scholarships and grants for South Carolina undergraduates. Only \$53 million or 17% of these funds are available to the state's neediest students to attend public and independent colleges and universities: 11% or \$34 million for students at independent institutions through the Tuition Grants program and just under \$20 million or 6% is available for students at public colleges and universities. The overwhelming portion of the state's student aid, 67% or \$207 million, is directed toward the state's academic or merit-based programs including Palmetto Fellows, LIFE and HOPE. The remaining \$ 47 million or 15% are provided to students at two-year colleges through the Lottery Tuition Assistance program.

Sufficient support for need-based grants, in addition to merit-based programs, is vital to success in improving the number of South Carolinians who enter college and graduate. Need-based financial aid is a critical element for any state that seeks to enhance the participation of students who have limited financial means.

²² SC Commission on Higher Education. (2007) Retaining graduates of SC public colleges and universities: A special report. 67% of Palmetto Fellows and 77% of LIFE recipients who graduated in 2001-02 were in SC five years later as evidenced by SC Motor Vehicle Drivers License.

²³ HESC Advisory Committee Report on State Scholarships and Grants. (January 2008).

²⁴ National Association of State Student Grant and Aid Programs. (2008). 38th annual survey report on state-sponsored student financial aid, 2006-07 academic year.

- **Aspirational Access**

In many sectors of South Carolina society, notably in the poorer areas of the Low Country, the Pee Dee, and the Upstate, relatively few adults have completed a college education. Without the help of these individuals – people who appreciate the fact that going to college and graduating is worth the effort and expense – many students do not develop a belief that college is a necessary or achievable option for them. This lack of aspiration translates into diminished attention to academics and becomes a self-fulfilling prophecy.

Changing aspirations is a challenging issue, but one that must be accomplished if we are to succeed in becoming a more educated state. The focus of local and state programs must change from an exclusive focus on academic preparation to include aspiration to succeed in postsecondary education and beyond. Aspiration means having an understanding of the value of postsecondary education to a successful career and a belief that higher education is an attainable goal. To illustrate, investments in more effectively trained teachers and better school buildings will not achieve the results we would expect if students return every evening to an environment where academic success is seen as having little practical value. Much work is already being done through SC GEAR UP, service learning programs such as the one at Coastal Carolina University through which college faculty and students serve as mentors for middle and high school students, and other similar activities. In addition, building a statewide marketing effort and especially a stronger and more pervasive set of local college access organizations is essential—success in this area requires not just local participation but local leadership.

Adult to Higher Education Pipeline

College enrollment has maintained a generally upward trend for the past several decades. Many adults beyond the traditionally-aged college student participate in college, but as evidenced in data reviewed earlier in this report, many more could benefit from college programs.

If South Carolina relies entirely on the traditional high school to college pipeline to raise its educational levels to nationally and internationally competitive levels, the timeline to success will take many decades. Simple mathematics tells us that a significant part of our effort to become more educated must come from increased adult participation (individuals 25 years and older). There are three key categories where progress with adults must be made:

- **Individuals without high school diplomas or with no college**

South Carolina has approximately 532,154 (18.7%) persons 25 years of age and older who lack a high school diploma. There are 927,713 (32.6%) who hold just a high school diploma and likely lack any instruction beyond the high school degree.²⁵ Most of these individuals were poor students in high school, not because they lacked ability, but because they failed to appreciate that learning was important to their future employment and quality of life. Now they are employed in jobs that require minimal skills and have as a consequence little opportunity for stable employment. To attract large numbers of these people into higher education will require

²⁵U.S. Census Bureau.

new structures and new approaches, for example, flexible formats, low-cost, multiple providers, and no-fail competency-based grading for certificates that build confidence at the entry point. This “New Front Door” to higher education could include instruction in life skills as well.

- **Individuals with some college**

There are approximately 515,080 (18.1%) persons twenty-five years and older in South Carolina who have some college but no degree.²⁶ These individuals typically have more confidence that they can succeed than those with no college, but they still face the challenges of the need for affordable, flexible education that is relevant to employment. One solution to this problem might be for South Carolina’s comprehensive universities to band together to offer a blended online/on-site program in an area such as organizational management. Courses could be offered in more compact formats than the usual semester, and students would receive their degree from the university nearest them that offers on-site courses. The sharing of course development and online offerings among the participating universities could significantly lower costs. Additionally, those adults who have completed a limited number of credit hours could be actively recruited into lower cost certificates or associate degree programs at the state’s technical colleges. These programs can prepare these students to transition seamlessly into a comprehensive university program.

- **College graduates seeking advanced credentials**

In many cases, college graduates seek advanced skills and education that don’t require an entire degree program but for which some type of certificate would be valuable to assure employers of the skills acquired. Areas of particular interest might be various specialties in information technology, where individuals bring in a variety of self-taught competencies but require additional skills as well as certification. By sharing course development, online offerings, and assessment mechanisms, South Carolina colleges and universities could greatly benefit the state’s employers and employees.

Inside Higher Education Pipeline Productivity

South Carolina ranks relatively very high among states, 11th and above the national average for public colleges and universities, in the standard national baccalaureate²⁷ graduation rate, which is 150% of full-time (six years).²⁸ As good as that is, it isn’t good enough. A productive system of higher education should have significantly higher six-year graduation rates and should also move toward ensuring that as many programs as possible can be completed in four years. High graduation rates make colleges and universities more efficient and save money for parents and students.

²⁶ U.S. Census Bureau.

²⁷ Note: South Carolina’s Associate Degree graduation rates for public two-year colleges ranks 44th nationally and 15th out of 16 Southern Regional Education Board (SREB) states.

²⁷. This metric can be misleading, however, since it relies on students’ statements of their degree intent. Many students in Associate Degree programs secure needed knowledge and skills in an initial cluster of courses then take jobs, returning to complete degrees at a later time in their careers.

²⁸ National Center for Higher Education Management Systems. (2006). Completion: Graduation rates. Data extracted from <http://www.higheredinfo.org>.

At least three approaches should be considered for improving baccalaureate degree graduation rates.

- **More effective developmental education**

The terms used for students who enter college unprepared in mathematics and English have usually been “remedial” for those entering directly from high school, and “developmental” for returning adults. Increasingly, however, “developmental” is used to describe both categories. Whatever the term, the loss rate for students who enter higher education without proper preparation is enormous. For example, a careful study in Kentucky concludes that, despite active developmental efforts, “underprepared students were still twice as likely to drop out of college as prepared students.”²⁹

South Carolina has some effective strategies in developmental education, including participation in the national projects such as Achieving the DreamSM Community Colleges Count project. In the long run, the South Carolina’s existing High School to College Course Alignment project should eliminate a significant portion of developmental education; it should also draw attention to what the College Board and ACT, Inc. have been reporting for several years about the absolute essential role course selection plays in preparation. But in the meantime the state must make a more concerted effort. It is not acceptable to have so many students enter college and fail.

Two core strategies in developmental education should be explored. First, the best remediation occurs *before* students enter college. South Carolina should have a system that provides for early assessments (usually at the end of the junior year of high school) that tell students what they need to do to avoid remediation and what placement they will have if they fail to make the necessary progress. This diagnostic system should be backed up with active programs in the schools and online to ensure that high school students have ample opportunities to improve their knowledge and skills.³⁰

A second education strategy should be to develop a standardized, research-based, continuous-improvement focused system of developmental education to ensure that all students throughout the state who need these services receive the most effective and efficient instructional support possible.

- **More effective transfer strategies**

In the past year, the University of South Carolina and Clemson University both put in place structured “bridge” programs that allow participating students who begin their work at technical colleges to be pre-admitted to the university if they succeed in appropriate coursework. These two statewide programs supplement a number of similar arrangements that exist in other areas around the state. Effective bridge programs like these should be available throughout the state.

²⁹ Kentucky Council on Postsecondary Education. (2006). Developmental education update. October 5, 2006, page 2.

³⁰ Several assessments are currently being used. The Department of Education is in the process of developing a new assessment that will be diagnostic in nature to replace the state’s PACT. S.C. Technical Colleges use COMPASS, a diagnostic assessment, for all incoming students, and the State Department of Education funds the PSAT or PLAN for all tenth grade students in public high schools across the state to offer diagnostic feedback for students as they begin high school and preparation for postsecondary education.

In addition to the motivational benefit that stems from the pre-admission, bridge programs are helpful because the receiving university actively participates in the advising process, thereby assuring greater focus and success.

Given that financial and other reasons cause increasing numbers of students to begin their baccalaureate programs at technical colleges, strong emphasis on successful transfer is an imperative for South Carolina.

- **Encouraging universities to limit as many baccalaureate programs as appropriate to 120 credit hours**

Many universities around the country have moved to limit their baccalaureate programs to 120 semester credit hours unless accreditation requires a greater number. These moves are a positive step for both students and parents and should be adopted by universities as appropriate in South Carolina. Structuring course work to make it possible to graduate in four years will benefit students and parents financially and increase the capacity of the system.

Attracting/ Retaining Students and Graduates

South Carolina brings more college students into the state than it loses.³¹ Also as noted earlier, recent data revealed that a large percentage of graduates from the state's public colleges and universities are remaining in the state after graduation; 68% of public college and university graduates of 2001-2002 remained in South Carolina as of 2007. The statistic is even higher at 79% when considering only those graduates who had come from South Carolina upon enrollment.³²

Despite these successes, it is imperative that South Carolina attract and retain more college graduates if we are to overcome our education deficit and be more competitive in the knowledge economy.

What Resources will be needed to increase education levels?

It will not be possible to calculate resource needs until the calculations of degrees, levels, and offering colleges and universities is complete. It should be noted at this point, however, that significantly expanding enrollment levels will require investments in both human and physical infrastructure over time—and perhaps a new approach to funding.

To provide context, note that higher education, despite declining state operating and capital funding, has sustained significant growth over the last decade: enrollment has grown by 19.4% overall, with a 17.9% increase in enrollment in public institutions. Over that time there has been a 24% increase in the number of degrees awarded (public and private), with a 17.7% increase in awards at public institutions. It is noteworthy that during the same ten year period, the number of bachelor's degrees earned by minority students increased by 64% and accounted for 44% of

³¹ Jones, D. and Kelly, P. (2007). The emerging policy triangle: Economic development, workforce development and education: Updated profiles for all 50 states and including international comparative data. National Center for Higher Education Management Systems.

³² South Carolina Commission on Higher Education. (2007). Note that data for independent institutions was not available for consideration in this study.

the total increase. Awards to minority students also accounted for over 60% of the increase in total number of associate degrees in the past ten years.³³

Given this very lean base, it must be clear that more enrollments will strain current capacity. One estimate, for example, shows that the S.C.'s freshman class would rise by nearly 7,000 students if high school graduation rates reach the national average and our college going rate remains at its current level.³⁴

Goal Two – Increasing Research and Innovation in South Carolina

Historically, South Carolina has valued research and innovation as essential components of its higher education institutions. The higher education funding mechanism matches research expenditures by thirty cents on the dollar. In 1988, under S.C.'s the Cutting Edge legislation (Act 629 of 1988), the Commission on Higher Education promoted and the General Assembly funded for two years (1989; 1990) small competitive research grants and endowed professorship programs. A decade later, two additional statewide programs were funded to promote research and technology, the South Carolina Research Incentive Grant Program and the South Carolina Information Technology Initiative (2000; 2001). More recently, the state has funded modest annual technology appropriations for the public two-year colleges and four-year comprehensive colleges and universities and, beginning in 2002, made considerably larger investments in research and innovation via the Research Centers of Economic Excellence/ Endowed Chairs program (Act 356 of 2002), the Research University Infrastructure Act (Act 187 of 2004), the South Carolina Life Sciences Act (Act 187 of 2004), the South Carolina Venture Capital Investment Act (Act 187 of 2004, Act 125 of 2005), amendments to the South Carolina Research Authority to create innovation and research Centers (Act 133 of 2005), the South Carolina Industry Partners Act (Act 319 of 2006), the Hydrogen Infrastructure Development Act (Act 83 of 2007) and the statewide fiber optic network referred to as the "Light Rail" (2007; Act 330 of 2008). In line with these and other such efforts, the General Assembly also passed legislation to help increase a knowledge sector workforce by providing additional stipends for undergraduate students receiving the Palmetto Fellows and LIFE scholarships who are majoring in science and math disciplines, computer science or information technology, engineering, science education, math education or health care and related disciplines including medicine and dentistry.

What are the benefits of increased research and innovation?

Nationwide throughout the 1990's, policymakers, legislators, university administrators and faculty, and business and industry leaders had little difficulty arriving at consensus on the issue of the importance of university research and innovation, mainly due to the enormous benefits that can result from the translation of applied and basic research into the marketplace. Since the World War II era, universities have attracted tremendously talented scientists and researchers

³³ South Carolina Commission on Higher Education. (2008). 2008 South Carolina Higher Education Statistical Abstract. Retrieved August 21, 2008, from <http://www.che.sc.gov/Finance/Abstract/Abstract2008web.pdf>

³⁴ McGuiness, A. and Novak, R. (2003).

from all over the world, placing major value on the research and innovation enterprise. When the fruits of academic research are translated into licenses, patents, start-up and spin-off companies, and when technology transfer and commercialization of research products or discoveries is successful, impressive benefits to the university and the state can result. The federal government recognized these general benefits to the national economy with the passage of the Bayh-Dole Act in 1980, which encouraged university technology transfer and granted research institutions control of intellectual property that resulted from federally-funded research. Jobs creation, workforce development, and increased per capita income are frequently cited as significant outcomes of university research; equally important is the enhanced quality of life that derives from new discoveries.

The story is well known of the semiconductor giant Intel and the emergence of a university-industry partnership. Following its announcement several years ago that it was going to add a new Research & Development (R&D) facility in Austin, the head of research for Intel, Albert Yu, was asked if Intel had selected Austin, Texas so as to be near customers like Dell. He responded that Intel had selected Austin because the city had become a high tech center and the company wanted to be “near the University of Texas and the talent coming out of there.”³⁵

The story of Austin, Texas is not unique as an industry-university collaboration success story. Other well known partnerships include Silicon Valley, California, and the Research Triangle in North Carolina. According to W.C. Hood, Jr., Executive Director of the Medical University of South Carolina Foundation for Research Development, “Since 1980, over 2,000 companies based on university and National Institutes of Health research have been founded. The V-chip, the PSA test for prostate cancer, hip implants, [and] Taxol are but a few of hundreds of discovery-to-commercial product success stories.”³⁶ Hood also notes that since the passage of the Bayh-Dole Act of 1980, almost 3,000 patents have been awarded to universities.³⁷

Jobs creation and workforce development are other essential dimensions of research and innovation partnerships between universities and business and industry. In South Carolina, the Clemson University International Center for Automotive Research Campus (ICAR) is home to corporate research and development offices for Timken and BMW. To date, they have created together over 400 high-paying jobs in the Upstate region. According to BMW Manufacturing Public Relations Manager Robert Hitt, BMW’s investment in the Center of Economic Excellence/Endowed Chairs program (CoEE) “has allowed us to improve our products and processes. Constant innovation is the only way that companies can stay competitive today, and the partnership with South Carolina’s research universities is a big part of our efforts to continuously improve what we make and the way we do things.”³⁸ Further, the BMW-Clemson

³⁵ Cited in South Carolina Research Centers of Economic Excellence Review Panel Final Report, May 31, 2007, page 4.

³⁶ South Carolina Centers of Economic Excellence. (2008). South Carolina Centers of Economic Excellence Report to the South Carolina Budget & Control Board, 2006-2007, citing C.W. Hood, Jr. University technology transfer—Timing is everything, page 56.

³⁷ South Carolina Centers of Economic Excellence. (2008).

³⁸ Interview with Robert Hitt. (2008). Extracted from South Carolina Research Centers of Economic Excellence website, www.sccoee.org.

investment partnership has resulted in the development of new degree programs in automotive engineering which are essential, according to Hitt, in helping BMW “build its future talent pipeline. To be successful in the long-term, the key is to recruit a workforce that is highly skilled and committed to continuous improvement. Our investment in CoEE is helping to identify the best and brightest students at Clemson and other educational institutions and to prepare them for careers in South Carolina’s automotive industry.”³⁹ To date, investment by the State and its private partners, including Michelin, total over \$250 million.

While according to the Association of American Universities “there is no definitive answer” to the number of jobs created via academic research and development funding, federal research and development grants to universities and colleges alone accounted for nearly 720,000 jobs nationally in 2000.⁴⁰

How are other states responding?

No wonder, then, that many states are seeking to harness the power of university research and innovation enterprises and link them to the achievement of statewide goals, including improving the quality of life for the state’s citizens. The Strategic Plan for the University System of Georgia sounds an appropriate call to urgent action on this front: “In an open world with permeable borders, Georgia must increasingly compete not only with fifty states, but also with other countries. It must seek to determine its own future, which entails controlling, creating, directing, and attracting the resources to ensure economic growth and a high quality of life. In a knowledge economy, creating and attracting intellectual resources is as vital as controlling and directing natural resources. Georgia cannot succeed on the world stage without a strong University System, marked by prominent institutions and programs that develop Georgia’s own human capital and draw the best talent from around the world.”⁴¹ Neither can South Carolina. A strong university system is critical to economic growth and an improved quality of life.

Nearly all states in the U.S. have responded to the almost universal perception of the need to increase research and innovation, measure results, and evaluate outcomes. Texas has set a goal of increasing the level of federal science and engineering research by 50% to \$1.3 billion. Virginia is advocating a state investment of \$45 million per year for five years. New Jersey is seeking to increase its current national ranking in aggregate share of federal research dollars from 20th to at least 15th. Tennessee wants to increase both the number and the size of its research grants and contracts and is exploring ways to enhance and reward applied research related to Tennessee’s economic development initiatives. Washington State is looking at ways to expand research capacity of its institutions and improve the commercialization of their research products. Kentucky’s eleven-year-old Endowment Match program, also known as the “Bucks for Brains”⁴² initiative, has dramatically increased the fundraising capacity of its public universities

³⁹ Interview with Robert Hitt. (2008).

⁴⁰ Derived from data at: <http://www.aau.edu/resuniv/FY97Employ.html> .

⁴¹ University System of Georgia Strategic Plan. (2008), Goal 3, www.usg.edu/strategicplan/three/index.phtm .

⁴² Kentucky’s Bucks for Brains Initiative: The Vision, The Investment, The Future 1997-2007, <http://cpe.ky.gov/NR/rdonlyres/CA48D119-0E78-41BB-9D05-1FFBBAOCF7C5/0/BucksForBrains10YearReport.pdf>.

and has advanced the academic and research quality and economic development in the state and is still going strong. Ohio is asking its institutions to identify research projects that address pressing needs in areas such as education and community development and also to collaborate with P-12 teachers in research projects that will enhance preparation of students for entry into either higher education or the workforce. Several of these and other states, like S.C. are developing strategies to encourage students to enroll in the STEM disciplines (science, technology, engineering and mathematics) in order to build the workforce pipeline for the researchers of tomorrow as well as developing programs to promote and enhance entrepreneurship.

How might South Carolina respond in its action plan to increase research and innovation?

The HESC explored a number of responses that will be further refined and expanded upon by a task force that has been appointed to develop the Action Plan Implementation recommendations for Goal 2. Thus, the summary provided below is neither exhaustive nor definitive but merely illustrative. The HESC considered two distinct dimensions of increasing research and innovation: measuring that increase and mechanisms for promoting it.

Measurement is the simpler of these two dimensions. There are a number of evaluation matrices that already exist that might be used. Research Universities are already familiar with the “Center for Measuring Universities – Research Universities Report,” which uses several variables to rank success in research and innovation, including total research expenditures; federal research expenditures; research by major discipline; endowment assets; annual giving; National Academy Membership; Faculty Awards; Doctorates Awarded; and Postdoctoral Appointees, among others, that might be relevant measures. Another set of metrics already in use by the Centers of Economic Excellence program is one developed for the Association of University Technology Managers’ annual licensing survey. These metrics capture invention disclosures; provisional U.S. patent applications; U.S. patent applications; U.S. patents issued; international patent applications; international patents issued; active licenses; licenses and options executed; and spin-off companies. Many of these elements were identified by the HESC as legitimate measures for evaluating and benchmarking increases in research and innovation. Also mentioned were 1) public-private partnerships, including those involving Fortune 500 companies and start-up companies and 2) increases in graduate degrees awarded in economic cluster or focus areas; innovative programs; collaborative programs, and programs devoted to research emphases areas (i.e., new fuels; supply chain; bioengineering and biomedical areas).

What mechanisms would South Carolina use to increase research and innovation?

The HESC suggested establishing incubators by using infrastructure bonds; expanding the endowed chairs (CoEE) program to allow for start-up costs in terms of recruitment costs, upfitting laboratories and facilities, providing graduate student stipends, fellowships, and other incentives; and providing other programmatic support up front as well as possibly expanding the program to include more of the comprehensive teaching universities. Also suggested was a program to enhance the quality of proposals submitted for funding which might include

matching incentive funds, training in grant writing, and mock reviews. Expanding undergraduate research was viewed as an important mechanism for enhancing the pipeline of graduate students and skilled workers to support the research and innovation enterprises. Making available venture capital to entrepreneurs, encouraging more and targeted collaborations, especially among public entities and private institutions; offering incentives to reward technology transfer; and providing funding for desperately needed new infrastructure, including buildings and equipment, were seen as mechanisms essential to expanding research and innovation. Finally, regulatory relief in terms of the State's personnel classification system and statutes and practices concerning construction of new buildings was identified as critical to all sectors achieving Goal 2.⁴³

What resources will be needed to increase research and innovation?

It will not be possible to calculate resource needs until the mechanisms for increasing research and innovation are selected. These mechanisms should be expected to vary institution by institution and to be mission-appropriate by sector as well as individual institution. It should be noted, however, that for this goal as for Goal 1, significantly increasing research and innovation productivity will require significant investments in human, financial, and physical resources.

Goal Three – Making South Carolina a Leader in Workforce Training and Educational Services

When considering the importance of higher education within the context of advancing economic prosperity, South Carolina must consider both the individual and public good of postsecondary education. Much is said about providing opportunities to individuals, since it is the individuals living and working within our borders that create, sustain, and, hopefully, thrive in our economy. However, the discussion of “workforce development” also requires looking at the workforce as an asset on which the state can build its foundation for economic development.

Overview

In the knowledge economy, the businesses and industries depending on and/or created by research, innovation and escalating advances in technology increasingly choose locations based, not solely on the presence of physical and natural resources or even on tax structures, but on the workforce. More than ever before, the availability of a highly skilled workforce is the key to economic prosperity for any city, state, region or nation. Additionally, a workforce aligned with knowledge economy skills and talents is necessary for the state to retain innovations and industries developed within its own borders. As reviewed previously in Goal 1, it is critical that we ensure mechanisms are in place to significantly increase the state's educational attainment levels, particularly in those areas of strategic importance for the state.

Workforce quality is intricately tied to both the educational attainment of that workforce and the alignment of the skills required with the needs of existing and expanding industries. A balance

⁴³ The on-site Review Panel for the CoEE program has suggested that tenure and promotion systems should be revised to incorporate commercialization and tech transfer results and successes emanating from research.

must be achieved among professionals, technicians, and trade-persons to support all levels within organizations. Convenient, economical and timely access to further training and education is essential to enable adult workers to adjust to the rapid changes characteristic of the modern economy.

Economic development also depends on an adequate supply of working-aged adults within the population. South Carolina is the 10th fastest growing state in the nation with expected growth of 7% by 2015; however, the state's labor force participation rate of 63.8% is below the U.S. labor force participation rate of 66.0%. This is primarily due to a lesser participation rate among those 45 years and above. Additionally,

LAGGING WORKFORCE PARTICIPATION
South Carolina's labor force participation rate of 63.8% is below the U.S. rate of 66.0%. This is primarily due to a lower participation rate among those 45 years of age and older.

South Carolina's population is aging, increasing from a median age of 35.3 in 2000 to a median age of 37.3 in 2007.⁴⁴ Projections of the change in numbers of high school graduates (including those from both public and independent schools) from 2005-06 to 2021-22 are relatively flat.⁴⁵ Although the state's population is growing rapidly, it is also aging. An aging population requires increasing the use of non-traditional methods for workforce development.

As previously described in relation to Goal 1, South Carolina needs greater levels of education and workforce training to be competitive. The state's current educational attainment levels are inadequate to provide a competitive workforce for the knowledge economy.

Workforce Needs

South Carolina needs greater levels of education and workforce training to be competitive; the state's current educational attainment levels are inadequate to provide a competitive workforce for the knowledge economy. One avenue for increasing South Carolina's educational attainment and creating a more competitive workforce is by increasing the high school graduation rate while maintaining or increasing the state's high college-going rate for high school graduates. This is essential for the state's competitiveness as 85% of new jobs require some level of postsecondary education⁴⁶ and "the share of jobs at low skill levels has declined since 1999 (in South Carolina)"⁴⁷. The state must also increase the competitiveness of the existing adult workforce. Improving the education of the young is cost effective and essential. However, to

⁴⁴ South Carolina Department of Commerce (2008). 2007 South Carolina labor market and economic analysis report. Retrieved August 25, 2008, from <http://www.sccommerce.com/docdirectory/ResearchFolder/Labor%20Market%20and%20Economic%20Analysis%20Report%20-%20South%20Carolina%202007.pdf>.

⁴⁵ Western Interstate Commission for Higher Education. (2008). Knocking at the college door: Projections of high school graduates by state and race/ethnicity 1992-2022. Colorado: Western Interstate Commission for Higher Education.

⁴⁶ Governor's Workforce Education Task Force. (2001). Pathways to prosperity: Success for every student in the 21st century workplace.

⁴⁷ South Carolina Department of Commerce (2008).

create, retain and attract knowledge economy industries, the state must meet the needs of those under- and unemployed adults, and the large numbers of the working-age population employed in industries facing obsolescence.

Jobs are currently being created in South Carolina. In 2007, the state had its highest rate of growth in non-farm jobs since 2001. Over 203,000 new jobs are expected to be created in South Carolina by 2016. Job creation will continue to grow only if a suitable workforce is present and available in the state. Currently, growth is projected in a wide variety of identified industry clusters. Wholesale trade and professional, scientific, and technical services industries are expected to grow 31% between 2006 and 2016. Over the past ten years the fastest job growth has been in healthcare occupations, especially nursing aides, medical assistants, and registered nurses. Healthcare is expected to add over 42,000 jobs by 2016. Manufacturing is the second largest employment sector in South Carolina, comprising 13% of all jobs and 72% of all new jobs in the state. Sectors expected to grow by at least 15% between 2006 and 2016 include: information, healthcare and social assistance, utilities, administrative support and waste management and remediation services, educational services, real estate and rental and leasing, and management of companies and enterprises.⁴⁸ A systemic workforce development plan must accommodate the need to develop a workforce sufficient both to replace retiring baby boomers (replacement jobs) and to provide a workforce for growing fields (new jobs).

Building on Successes

Just as the alignment between secondary and postsecondary education is necessary for effective workforce development, so is improving alignment and collaboration among the postsecondary sectors. (See also Goal 1.) The growth and acceptance of articulation agreements between two- and four-year colleges and universities and of formal “bridge” programs provides increasingly seamless transitions for those students who begin their education in the two-year college sector. What is more, since about half the South Carolina residents attending public institutions as undergraduates are enrolled in two-year institutions, providing clear and easily navigable pathways between sectors is vital.

South Carolina also has a long tradition of meeting the needs of new and expanding businesses by providing workforce development training to support their growth. Since its inception in 1961, the Center for Accelerated Technology Training (CATT), a division of the South Carolina Technical College System, and its *readySC* program have been training employees for new and expanding industries. Participants are trained to meet the specific requirements of qualified industries. *readySC* is recognized as one of the top five workforce development training programs in the nation by *Expansion Management* magazine.⁴⁹ In 2007-08, *readySC* served

⁴⁸ South Carolina Department of Commerce (2008).

⁴⁹ *readySC*. (2008). *readySC*, a division of the SC technical college system. Retrieved August 21, 2008, from <http://www.readysc.org/index.htm> .

90 companies and trained nearly 7,000 individuals.⁵⁰ This program is clearly one of South Carolina's competitive advantages.

Yet another new initiative to meet business needs was created in 2007. *Apprenticeship Carolina* supports the creation of business-sponsored registered apprenticeship programs. Registered apprenticeships have not been a tool utilized heretofore in South Carolina. Typically, South Carolina has less than 10% of the apprenticeship registrations or programs that exist in North Carolina or Florida. *Apprenticeship Carolina* staff work with technical colleges and businesses to provide information and technical assistance to create registered apprenticeships. Just one year into the initiative, the state has seen 22 new programs; South Carolina typically has two to three new programs in a year. The number of apprentices in the state has increased to 1,158 from the historical average of fewer than 800, a 45% increase.⁵¹

In support of the apprenticeship initiative, the South Carolina General Assembly allocated \$1 million in recurring funding to the South Carolina Technical College System for the promotion and infrastructure required to support registered apprenticeship in the state. In addition, employers sponsoring registered apprenticeship programs are now eligible for tax credits of \$1,000 per apprentice per year for up to four years. The credits apply to new apprentices as of January 1, 2008. Other support has come from the South Carolina Workforce Investment Board which has allocated \$1 million in competitive funding for employers developing a registered apprenticeship program in collaboration with a state technical college.

Another tool available in South Carolina for workforce and economic development is WorkKeys Career Readiness Certificate. For many years, the South Carolina Technical Colleges have helped businesses use WorkKeys, an ACT product, as a hiring tool for businesses. Approximately, 250 businesses in the state use WorkKeys as a part of their hiring and/or promotion process. Through the leadership of *New Carolina* with involvement by the South Carolina Department of Commerce, the Technical College System and other partners, a more formal use of WorkKeys has been adopted in the state – a Career Readiness Certificate. South Carolina is a leader in the nation for WorkKeys testing.

Moving Forward

All sectors of higher education have a role in workforce development with distinct yet complementary missions. Beyond their role in research, the state's research universities also contribute to the incubation of businesses that evolve from research performed at the universities. Research and innovation do not result in economic prosperity unless that research can be turned into new products and services within South Carolina's borders. Therefore, colleges and universities are creating public/private partnerships to support businesses that emerge from this research. An example includes the interaction of the University of South Carolina Columbia Technology Incubator and Midlands Technical College's Enterprise Campus.

⁵⁰ Center for Accelerated Technology Training. (2007). 2006-2007 Fiscal year annual report. Retrieved August 21, 2008, from http://www.readysc.org/AnnualReport_FY2007.pdf.

⁵¹ South Carolina Technical College System. (2007). Working for your future, Apprenticeship Carolina. Retrieved August 21, 2008, from <http://www.sctechsystem.com/ApprenticeshipCarolina/fundingsupport.htm>.

The incubator allows emerging companies to develop product concepts within a supportive environment. The incubators provide training opportunities at the professional and graduate level in emerging fields further strengthening long term growth and sustainability. They are an essential link in moving research and innovation from inception to production. Companies with viable business plans can graduate from the University of South Carolina incubator and move to the Enterprise Campus at Midlands Technical College. The Enterprise Campus is a working-learning environment powered by the collaboration of private/ public resources focused on transitioning technology seamlessly between the classroom and the workplace. This environment attracts investments in technologies that create sustainable jobs in the region. The state's focus on building a knowledge economy by growing businesses from within only works if we have the workforce in place to commercialize research within the state.

Collaboration and communication between higher education and business-led groups is essential for development of the state's workforce. *New Carolina*, through its cluster work and the efforts of the Workforce and Education Task Force, is a key catalyst for collaboration and for bringing together educational providers and a wide variety of stakeholders. Other key partners in workforce development include the Palmetto Institute with their goal of increasing South Carolina's per capita income and the S.C. Chamber of Commerce, which provides the statewide voice for businesses. The S.C. Department of Commerce, local and regional economic developers, the S.C. Research Authority, and the S.C. Economic Development Association all have a role to play in collaborating with higher education to develop the state's workforce; specifically in communicating the current and emerging workforce needs.

Higher Education Services

Each sector in higher education, in alignment with their missions, must work to improve services to both traditional and non-traditional students and to provide education and programs that support the economic development of communities, regions, and the state or nation. Providing individuals with economically feasible access to higher education and the programs relevant to the knowledge economy will require creativity and collaboration between education and partners in workforce and economic development through the state.

The HESC has not completed a catalog of higher education services; consultation on this issue will occur in the development of the Action Plan Implementation report. However, examples of educational services that have been used in early discussions include the following:

- Arts outreach programs provided by colleges and universities;
- Medical residencies (programs training physicians in specialization areas at teaching hospitals), which are an important component of medical education. Medical schools, by building high quality residency programs, attract and retain outstanding physicians while strengthening the quality of care;
- Assistance to non-profit organizations; and
- Service learning.

Other examples of higher education services, such as agricultural extension and work with the schools, have been mentioned in earlier sections.

Goal Four – Realizing South Carolina’s Potential: Resources and Effectiveness

Goal 4 seeks to ensure that there are adequate resources to make the Action Plan successful while at the same time ensuring that documented institutional effectiveness continues to be a priority for colleges and universities. South Carolina has a well-established accountability system but has not historically provided adequate funding for colleges and universities. The core of the work for this goal will be accomplished in the Action Plan Implementation report that will be produced in December. However, preliminary discussions suggest that the Goal 4 section of the Implementation report will be organized into three key areas: 1) existing efforts in effectiveness; 2) areas where streamlined state-level management systems could produce improved results; and 3) areas where colleges and universities, singly or together, will aim for improved effectiveness.

Existing Efforts in Effectiveness

Colleges and universities have strong reasons to improve their effectiveness—both academic and financial—and, even before Performance Funding was enacted in 1996, institutions regularly made significant progress in operational and instructional effectiveness. These accountability processes have assisted in quantifying those achievements and have helped to foster further improvement. Notable in the effectiveness category are: South Carolina’s relatively high baccalaureate graduation rate as cited previously, clearer mission focus, and better review of faculty performance including post tenure review.

The Importance of Effective Management Systems at Institutions

The founder of modern total quality management services, W. Edwards Deming, bemoaned the “endless rework” that characterizes too many government processes. The Implementation report will explore areas where simplification of systems can both save money and improve quality at the institutional level.

Areas of Potential for the Future

Many South Carolina colleges and universities share services and resources with other institutions. For example, University of South Carolina Upstate shares a major facility with the National Guard and Coastal Carolina and Horry-Georgetown Technical College share security services. These kinds of collaborative arrangements hold potential for further savings, as does expansion of the kinds of shared instructional services already extant in the Lowcountry Graduate Center and the University Center of Greenville.

CONCLUSION

The preceding sections have demonstrated that the benefits to investing in higher education are powerful:

- Making South Carolina one of the most educated states will strengthen the state's economic competitiveness and improve income and job security for individuals;
- Increasing research and innovation will create new high-paying jobs by bringing additional federal and industrial funds into the state, will assist in attracting, retaining, and starting businesses, and will enhance South Carolina's reputation as a knowledge leader;
- Increasing workforce development and educational services will offer new opportunities to individuals as companies in the fast-growing knowledge-focused business sector decide to come to South Carolina or expand their operations here.

Goal 4, Demonstrating efficiency and effectiveness, is not a separate goal in the sense of these three, but is a means of achieving them.

Analyzing the Value of Higher Education: A Public Benefit and An Individual Benefit

Another way of looking at the value of higher education is to consider it from two perspectives: 1) as an economic and social benefit to society as a whole, and 2) as an economic and social benefit to individuals. The following table summarizes the differences.⁵²

	HIGHER EDUCATION AS A PUBLIC BENEFIT	HIGHER EDUCATION AS AN INDIVIDUAL BENEFIT
ECONOMIC	<ul style="list-style-type: none"> ➤ Increased tax revenues ➤ Greater productivity ➤ Increased consumption ➤ Increased workforce flexibility ➤ Decreased reliance on government financial support 	<ul style="list-style-type: none"> ➤ Higher salaries and benefits ➤ More stable employment ➤ Higher savings ➤ Improved working conditions ➤ Personal/professional mobility
SOCIAL	<ul style="list-style-type: none"> ➤ Reduced crime rates ➤ Increased charitable giving/ service ➤ Increased quality of civic life ➤ Social cohesion/ Appreciation of diversity ➤ Improved ability to adapt to and use technology 	<ul style="list-style-type: none"> ➤ Improved health/ life expectancy ➤ Improved quality of life for children ➤ Better consumer decision making ➤ Increased personal status ➤ More hobbies/ leisure activities

⁵² Institute for Higher Education Policy. (2005). The investment payoff, page 4.

Analyzing the Value of Higher Education: Calculating the Return on Investment

A more specific way of illustrating the impact of higher education on a state's economy and quality of life is to do a return on investment analysis—if the state provides the funding needed to advance in these areas of higher education, do the actual dollar benefits outweigh the costs? As it happens, we do have an answer to this question. A few years ago, the state of Texas commissioned an independent business organization to study the economic impact of the state's *Closing the Gaps* higher education plan.

Texas' economic analysis was done by Perryman Associates, a well-established business that has done econometric studies over many years. Using a thoroughly tested state economic model, the Perryman analysis calculated changes from increased investment in higher education affecting: income, unemployment, productivity, research spending, and social costs (public assistance, unemployment, health costs, and incarceration). The model resulted in a “two state” analysis: one that factored out expected increases from existing higher education infrastructure and simply projected the *status quo* going forward, and another that calculated additional benefits from increased higher education investment. Perryman conclusions are striking:⁵³

- In a nine-year period (2006-2015) , the analysis projects an increase of 308,000 jobs; in a twenty-four year period (to 2030), the projected increase in jobs is just over one million.
- By 2015, the increase in *annual* gross state product would be over \$41 billion in constant dollars; by 2030 it would be over \$194 billion.
- Personal income would rise over \$26 billion by 2015 and reach over \$121 billion by 2030.
- The state investment (facilities, human infrastructure) would be fully repaid in nine years and “over the entire 2006-2030 period, the State generates about \$8.08 in revenues for every \$1 in spending.”⁵⁴ Note this is for the state only—it excludes the enormous benefits to individuals.

The return on educational investment analysis for South Carolina would produce different numbers, of course, but there is every reason to believe that the consequences would be the same but proportional to the relative size of the two states.⁵⁵

Isn't a High School Diploma Enough for Most People?

This is a question we encounter quite often in South Carolina. It's a good question, one that is based on experience—it's a fact that historically, most people with a high school diploma and

⁵³ The Perryman Group. (2007). A tale of two states—and one million jobs! Waco, Texas: PerrymanGroup.com. Also available at www.theccb.state.tx.us .

⁵⁴ The Perryman Group (2007), page 50.

⁵⁵ The HESC plans to do a comparable analysis for South Carolina as soon as possible.

some skills learned on the job did quite well in both income and employment stability. The problem is that this success was in the old natural resources/ unskilled labor-intensive manufacturing economy and we are now in a knowledge economy where most businesses, including manufacturing, are innovation-driven.

In today's knowledge economy, the proportion of jobs that requires only a high school diploma continues to shrink. And people with this minimal level of preparation are seeing their wage levels and job stability continually decline as employers outsource to other countries and substitute technology for the simplest tasks. To illustrate, we all know that many low-level manufacturing jobs have moved to Mexico, China, and other countries, and that jobs that once seemed to require an actual person, such as meter-reading and phone support, have been automated. But how many know that McDonald's has experimented with a drive-through system where orders are taken by workers in a call center hundreds of miles away?⁵⁶

What Would Happen if South Carolina Didn't Invest More in Higher Education?

A reasonable way to think about South Carolina's future would be to consider what would happen if we chose not to make South Carolina one of the most educated states, increase research and innovation, and increase workforce development and educational services? What if we simply decided that the *status quo* was good enough?

The first thing to realize is that if we choose to stand pat we will be virtually alone. Most states in the United States and many foreign countries are staking their economic futures on radically increasing education levels, research, and workforce development. Consider just a few examples.

- **Kentucky** launched the *Double the Numbers Plan* in 2007 (an extension of an earlier effort). The plan outlines five statewide strategies for Kentucky to double the number of bachelor's degree holders in the state by 2020. The plan states that increasing bachelor's degrees is the quickest, most direct way for Kentucky to increase its economic prosperity.⁵⁷
- **Texas'** *Closing the Gaps* program is a vast effort to transform the state's economy. It plans to increase number of degrees and certificates by 50% in ten years, and increase sponsored research by 50% in ten years.
- **Oklahoma's** *Brain Gain 2010* intends to double the number of degree holders over age 25 in ten years.⁵⁸

⁵⁶ The Long-Distance Journey of a Fast-Food Order, New York Times, April 11, 2006,

⁵⁷ Kentucky Council on Postsecondary Education. (2008). Double the numbers: 2020 projections. Available online at <http://cpe.ky.gov/planning/2020projections/index.htm>

⁵⁸ Oklahoma State Regents for Higher Education. (1999). Brain gain 2010: Building Oklahoma through Intellectual Power. Available online at <http://www.okhighered.org/studies-reports/brain-gain/braingainsummary.pdf> .

- **Indiana's** *Reaching Higher* effort focuses on economic development through increased access (including especially affordability), improved success to graduation, and more sponsored research.⁵⁹
- **Ohio's** ten-year strategic plan proposes to graduate 20% more students, keep 10% more students in state, and attract 100% more degree holders from out of state.⁶⁰

The five states listed above are currently among the least educated. The leading and rising states are not standing still either. For example:

- **Massachusetts**, already the nation's most educated state, is determined to increase its lead. Despite a foundering national economic picture, the state increased support for higher education by 5.3% in 2008.
- **New Jersey** despite rapidly growing education levels, the state plans to increase enrollment 66.7% in just three years (2007-2010—primarily through improved affordability and better graduation rates), and increase research rankings from 21st to 12th over a five year period.⁶¹
- **Georgia** plans to add 100,000 students to its higher education system in the period 2007-2020 while at the same time sharply improving its research competitiveness.⁶²

Finally, other nations are actively pursuing higher levels of higher education as an economic development strategy. In 1980, the United States was the most educated country in the world. By 2000, it was well behind a group of leaders that include Canada, Japan, and South Korea.

The Bottom Line

South Carolina must become one of the most educated states, increase research and innovation, and increase workforce development and educational services if it wants to avoid being the equivalent of a third world country inside the United States. The good news is that competing in higher education will produce almost immediate benefits – returns on investment that will quickly pay off the initial required funding as well as improving the state's quality of life over the long term. The Action Plan Implementation report, to be released in December, will provide more details.

⁵⁹ Indiana Commission for Higher Education. (2007). *Reaching higher: Strategic directions for higher education in Indiana*. Available at <http://www.che.state.in.us/Policies/Strategic%20Directions%20final%20as%20approved%2006-08-2007%20w%20technical%20corrections.pdf>.

⁶⁰ Fingerhut, E.D. (2007). *Strategic plan for higher education, 2008-2017*. Ohio Board of Regents. Available at <http://uso.edu/strategicplan/>.

⁶¹ State of New Jersey Commission on Higher Education. (2007). *2007 Progress report and call to action*. Available at <http://www.state.nj.us/highereducation/lrp07data/index.html>.

⁶² The Board of Regents of the University System of Georgia. (2007). *University System of Georgia Strategic Plan*. Available at <http://www.usg.edu/strategicplan>.

APPENDIX A

Advisory Committees of the HESC

The HESC established six Advisory Groups to assist in exploring areas of study as listed in the charge to the HESC. The Advisory Groups met during the fall of 2007. The HESC appreciated the time and commitment of each of the following individuals and thanks them for their service to this effort. The work completed by the advisory groups has been helpful in informing the HESC report and will be beneficial in future development and implementation of a statewide Higher Education Action Plan.

Organization and Plan Implementation

Mr. Robert Marlowe, *Advisory Group Chair, HESC Member*
Col. Claude Eichelberger, *Advisory Group Vice Chair, HESC Member*
Dr. Dori Helms, *Advisory Group Vice Chair, HESC Member*
Dr. Bob Becker, Director, Strom Thurmond Institute
Dr. Amy Blue, Assistant Provost for Education, Medical University of South Carolina
Dr. Ronnie Booth, President, Tri-County Technical College
Dr. David DeCenzo, President, Coastal Carolina University
Dr. Tony DiGiorgio, President, Winthrop University
Mr. George Fletcher, Executive Director, *New Carolina*
Dr. Skip Godow, Executive Director, Lowcountry Graduate Center
Mr. Jim McNab, Executive Chairman, Argolyn BioScience, Inc.
Dr. Garrison Walters, CHE Executive Director
Julie Carullo, CHE Director of Governmental Affairs and Special Projects, *CHE Staff Support to the Advisory Group*

Institutional Missions and Academic Programs and Planning

Dr. Dori Helms, *Advisory Group Vice Chair, HESC Member*
Mr. Boone Aiken, III, Esq., *Advisory Group Vice Chair, HESC Member*
Representative. Jerry Govan, *Advisory Group Vice Chair, HESC Member*
Dr. Fred Baus, President, University Center of Greenville
Dr. Mark Becker, Provost & Executive Vice President for Academic Affairs, University of South Carolina
Ms. Betsy Fleming, President, Converse College
Dr. Elise Jorgens, Provost & Senior Vice President for Academic Affairs, College of Charleston
Representative B.R. Skelton, South Carolina House of Representatives
Dr. Dewitt Stone
Dr. Sonny White, President, Midlands Technical College
Dr. Gail Morrison, CHE Deputy Director and Director of Academic Affairs & Licensing, *CHE Staff Support to the Advisory Group*

Enrollment

Dr. Layton McCurdy, *Advisory Group Chair, HESC Member*
Mr. Robert Marlowe, *Advisory Group Vice Chair, HESC Member*
Mr. Jim McNab, Executive Chairman, Argolyn BioScience, Inc.
Mr. Charlie FitzSimons, former Special Assistant to the Executive Director, *CHE Staff Support to the Advisory Group*

Higher Education Funding and Institutional Costs

Mr. Scott Ludlow, Advisory Group Chair, HESC Member
Dr. John Montgomery, Advisory Group Vice Chair, HESC Member
Mr. Bill Berg, Director of Institutional Planning & Research, Furman University
Ms. Ginger Hudock, Vice Chancellor for Business and Finance, University of South Carolina Aiken
Mr. Howie Roesch, Vice President Business Affairs, Tri-County Technical College
Mr. J.P. McKee, Vice President for Finance and Business, Winthrop University
Ms. Lisa Montgomery, Vice President for Finance & Administration, Medical Univ. of South Carolina
Dr. Harry Stille, Due West, South Carolina
Mr. Gary Glenn, CHE Director of Finance, Facilities and MIS, *CHE Staff Support to the Advisory Group*

Buildings, Facilities and Information Technology

Dr. John Montgomery, *Advisory Group Chair, HESC member*
Col. Claude Eichelberger, *Advisory Group Vice Chair, HESC Member*
Mr. Scott Ludlow, *Advisory Group Vice Chair, HESC Member*
Dr. Bob Cape, Senior Vice President, Information Technology, College of Charleston
Mr. John Dixon, Chief Information Officer, Francis Marion University
Mr. Walter Hardin, Associate Vice President for Facilities Management, Winthrop University
Dr. Bill Hogue, Vice President for Information Technology, University of South Carolina
Mr. John Malmrose, Chief Facilities Officer, Medical University of South Carolina
Ms. Sandy Williams, Director of Facilities Planning & Management, Coastal Carolina University
Mr. Gary Glenn, CHE Director of Finance, Facilities and MIS, *CHE Staff Support to the Advisory Group*

State Scholarships and Grants

Representative Jerry Govan, *Advisory Group Chair, HESC Member*
Mr. Boone Aiken, III, Esq., *Advisory Group Vice Chair, HESC Member*
Mr. Torlando Childress, Vice President, S.C. Community Bank
Dr. Ann Crook, President, Orangeburg-Calhoun Technical College
Dr. Baron Holmes, Project Director, S.C. Kids Count, State Budget & Control Board
Dr. Andrew Hugine, former President, S.C. State University
Mr. Herb Johnson, Community & Governmental Outreach, Michelin Public Relations Group
Senator John Matthews, South Carolina Senate
Ms. Cynthia Mosteller, CHE Commissioner, Governor's Appointee At-Large
Mr. Maceo Nance, Director, Community & Rural Development, South Carolina Department of Commerce
Dr. Karen Woodfaulk, CHE Director of Student Services, *CHE Staff Support to the Advisory Group*

ERRATA

The following corrections have been made to the report after its release as noted below:

- 1) Page 12. Text for Footnote 14 was amended to note the correct data source.
- 2) Page 30. The first initial of Deming's name was corrected.