



# 2008 Progress Report

**South Carolina Budget and Control Board  
South Carolina Department of Education  
South Carolina Educational Television  
South Carolina State Library  
AT&T  
Lightstar Partners**

## Table of Contents

<b>Executive Summary</b> .....	3
<b>Introduction</b> .....	6
<b>The Five Essential Technology Dimensions</b> .....	9
Learners and Their Environment .....	9
Professional Capacity .....	19
Instructional Capacity .....	26
Community Connections.....	33
Support Capacity.....	35
<b>Conclusion</b> .....	39
<b>References</b> .....	41
<b>Appendix A</b> .....	42
K-12 School Technology Initiative Milestones .....	42
<b>Appendix B</b> .....	46
Testimonial: Teacher Technology Proficiency System .....	46
<b>Appendix C – What Others Are Saying</b> .....	49

## EXECUTIVE SUMMARY

The purpose of this document is to provide a status on the progress of the South Carolina K-12 School Technology Initiative in supporting and implementing educational technology programs and digital learning in South Carolina schools. Underpinning the valuable programs illustrated in this report, are the efforts of the K-12 School Technology Initiative to build and maintain an infrastructure equipped to foster productive and engaging learning environments. All of the work highlighted in this report supports and promotes the essential 21<sup>st</sup> century skills that students must possess in education, life and work in today's global world.

This report centers around three major themes, the first of which being the 2003–2008 South Carolina Educational Technology Plan. This plan effectively explains and sets objectives for five major technology areas/dimensions. The five technology dimensions were derived from the guidance of *Technology in American Schools: Seven Dimensions for Gauging Progress—A Policymaker's Guide*, published by the Milken Exchange on Education Technology (Lemke and Coughlin 1998). These dimensions of technology progress – which consist of “Learners and Learning Environments,” “Professional Competency,” “System Capacity,” “Community Connections” and “Technology Capacity” – are regarded as synergistic parts of a single system. The framework they create emphasizes a combination of critical elements that are necessary for a school district and/or school to effectively use technology to accelerate student achievement and learning.

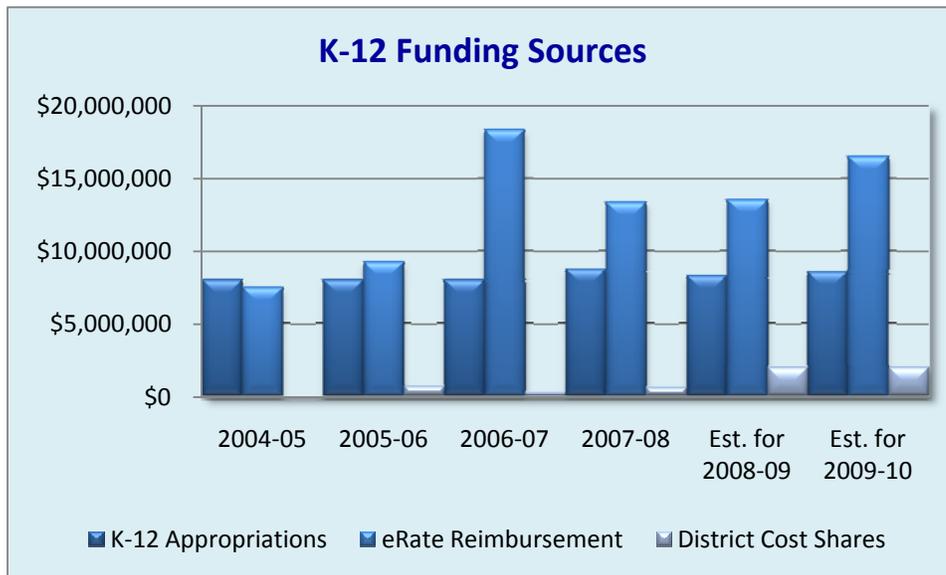
The second theme is based on the report entitled, “K-12 Digital Information Systems – More than a Screen and a Keyboard” (2008). This report makes recommendations for infrastructure, capacity, resources and access guidelines that need to be in place in order for South Carolina to foster productive, technologically-literate citizens. The report was produced by the Tech Think committee in the summer of 2008 as a call to the General Assembly to place major emphasis on access, infrastructure and educational technology. The task force was comprised of educational and technology leaders from across South Carolina. Several recommendations made for consideration in this report align and are fully supported by K-12 Technology Initiative committee initiatives.

The third theme interwoven throughout the report is the nationwide emphasis on the push to improve science, technology, engineering and mathematics (STEM) in our nation's schools. Education Week's Technology Counts Survey grades each state in three core areas of state policy and practice: access to instructional technology, utilization of technology and the



capacity to effectively implement educational technology. The following pages will demonstrate how the K-12 School Technology Initiative has contributed to South Carolina earning a B- in the survey's three core areas in 2007 and 2008. More importantly, this Progress Report will demonstrate how the Initiative can contribute to raising the grade in future years.

The funding allocated by the General Assembly is supplemented by E-Rate funding from the federal level, however, E-Rate funding is in jeopardy as there is a movement in Congress to eliminate the program entirely. Without both sources of funding, schools would not only lose connectivity, but the invaluable resources necessary to facilitate academic achievement among students as well. The graph below shows the considerable funding for technology in South Carolina schools provided by the E-Rate discount program.



Since the inception of the E-rate program, South Carolina schools and libraries have received an average of \$33.7 million annually in telecommunication and Internet access discounts through both individual and consortium applications. The budgets of our schools and libraries are always stretched to the breaking point, and the funding from E-rate has proven critical in allowing the state of South Carolina to build and support the telecommunications infrastructure to meet the growing technology needs of our schools and libraries and to provide Internet access to students and library patrons.

The Division of State Information Technology (State IT) serves as the administrator for the K-12 School Technology Initiative funds under the direction of the School Technology Initiative. State IT also files E-rate applications each year as a consortium for both telecommunications services and Internet access on behalf of South Carolina public schools and libraries as well as being the state E-rate coordination resource for South Carolina to assist other applicants in the state. The State Department of Education (SCDE) determines eligibility for public schools in South Carolina and acts as the Universal Services Administration Company (USAC) certified approver for school district technology plans while the State Library acts as the USAC certified approver for library technology plans.

As part of the response to Congressional inquiries, the Office of the Inspector General (OIG) of the Federal Communication Commission (FCC) selected approximately 300 applicants nationwide who received any E-rate funds during the 2007-08 funding year to be included in their recent round of program compliance audits. The statewide applications for Internet access submitted by State IT as well as the individual applications of several school districts for eligible network equipment and telephone services were included in these audits. Hundreds of man-hours as well as other state resources, such as office space, archiving and printing documents, office supplies, etc., were spent by these applicants to locate and provide the requested documentation to the on-site auditors.



The impact of the findings of these audits is unknown at this time; however, the audits serve as further indication that the federal E-rate program continues to be under scrutiny and should not be considered as a guaranteed funding source for education in South Carolina. Because of the uncertainty of E-Rate funding, the General Assembly must step in to ensure our schools' educational technology and support needs are met. The future of the E-Rate program is, at best, uncertain. The statement below from Education Week (2008) clearly shows the direction of the nation in implementing technology to teach 21<sup>st</sup> century skills.

“Elected officials are trying to think about what the 21st-century economy is going to look like in their states, and how the K-12 systems in their states can contribute to that economy. STEM education is really about building a positive future [with] high-wage, highly skilled jobs.”

*Education Week, 2008*

## INTRODUCTION

Today's world is one of incredible innovation and change. It is a world where information and technology change dynamically. Technology has become the global medium for a connected world. South Carolina's citizens, business leaders and legislators must be proactive and work together to prepare our students for successful, productive futures in the 21<sup>st</sup> century.

A part of the General Assembly's proactive approach to addressing technology infrastructure, connectivity and education in the schools was the establishment of the K-12 School Technology Initiative which is guided by a unique public/private partnership. This partnership, which includes the South Carolina Department of Education, South Carolina Educational Television, the South Carolina Budget and Control Board, the South Carolina State Library and AT&T, guides the distribution of funds appropriated by the Governor and General Assembly that collectively meet the state's needs for software, hardware, connectivity, digital content, instructional technologies and professional development.

Listed in this report are many of the major accomplishments of the partnership in actively and effectively addressing the areas above.

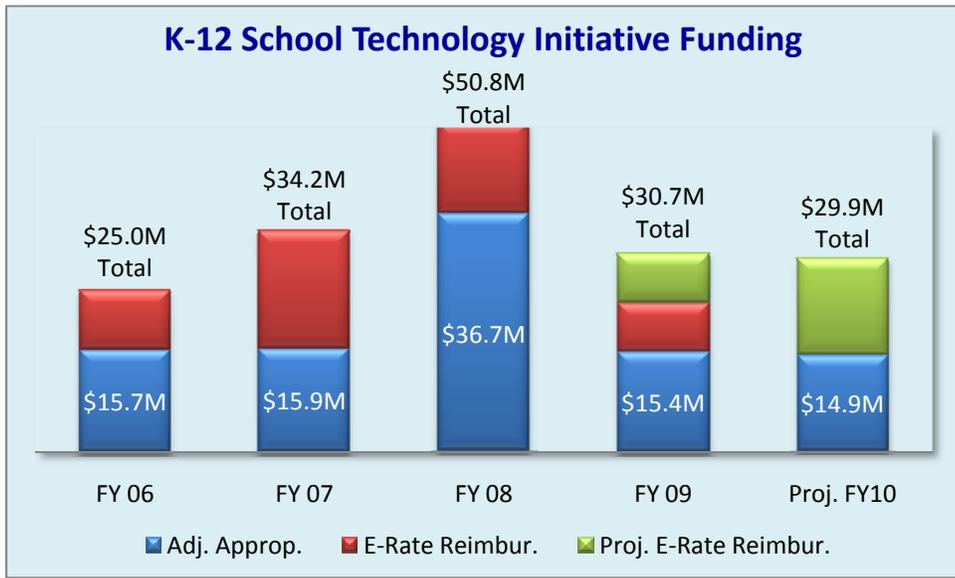
**"The South Carolina K-12 Technology Initiative has helped our great state become a leader in America in bringing Internet technology and exceptional educational content to our schools and libraries."**

*The Honorable John Courson, (R) Richland-Lexington Counties  
Senate Education Committee Chairman*

6

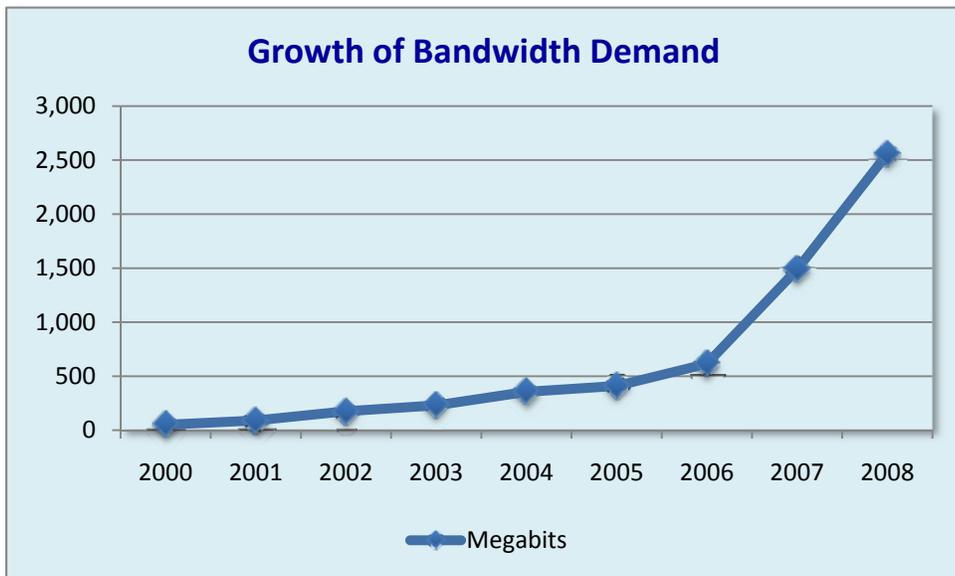
In the 1990s, South Carolina took the lead in the nation for supporting educational technology by wiring all schools for Internet access. The state also implemented an enterprise-wide data collection system (SASI) and was only one of a few states to adopt teacher and student technology standards as part of the curriculum. During the '90s, South Carolina was referenced as a model and leader in technology implementation by periodicals such as Education Week and professional organizations such as the Southern Regional Education Board (SREB) as well as the International Society for Technology in Education (ISTE).

However, the past few years have seen South Carolina's early lead diminish with decreased funding for information infrastructure and information equality that made the state a model in the early 1990s. The graph provided illustrates the startling decline in funds which have lead to the point where student demand for technology exceeds what can now be provided through available resources.



An ever-increasing portion of current state funding is required to cover the cost of maintaining schools' Internet connectivity. This decreased funding will be highly detrimental to the state's progress especially when considering the growth in bandwidth demand for schools as illustrated in the chart below:

7



Without adequate bandwidth, schools will not be able to leverage critical programs that have proven value to learning and digital equity such as StreamlineSC, Knowitall.org, Schoolrooms Portal, Digital Information for South Carolina Users (DISCUS), eLearningSC and the South Carolina Virtual School program. Substantial research, such as a study conducted by SREB, portrays business leaders who repeatedly state that the "workforce must be able to use digital information systems and that the key to stimulating economic development is the ability of our K-12 education system to teach

21<sup>st</sup> century skills – skills that include navigation, the Internet, locating, evaluating, synthesizing and communicating information (Tech Think, 2008).”

The future fiscal stability and growth of our state’s economy depends on South Carolina students’ abilities to use computers and digital information systems in an age of information where the world is at one’s fingertips. In order to stimulate economic growth in the state, our K-12 education system must leverage and teach through educational technologies using interactive learning resources over a robust infrastructure. South Carolina’s students should experience and learn in school how to adapt and operate in the business world that will face them after graduation.

The K-12 School Technology Initiative is extremely proud of its progress in the development and implementation of educational technology as well as the strides that have been made in providing infrastructure initiatives designed to produce more successful students in South Carolina. It is our hope that the leaders of the Palmetto State will continue their history of using the K-12 School Technology Initiative to guide the provision of high-quality, information-rich education for all students.

# THE FIVE ESSENTIAL TECHNOLOGY DIMENSIONS

## I. Learners and Their Environment

### South Carolina Technology Plan Goal:

The South Carolina Department of Education (SCDE), school districts and individual schools will use research-proven strategies to provide home, school and community environments conducive to our students' achieving technological literacy by the end of the eighth grade and to raise the overall level of academic achievement in South Carolina.

### K-12 Technology Initiative's Efforts to Support the Goal:

Legislative mandates addressed under this dimension include providing environments that increase student achievement. The national push toward STEM education explains the importance of having learning environments to support effective teaching of science, technology, engineering and mathematics. To South Carolina's credit, funding made available by the Governor and General Assembly through the K-12 School Technology Initiative helped to make possible a 2006 South Carolina Virtual School (SCVS) pilot that has become a thriving program today. The SCVS offers courses for all students in South Carolina to address the STEM subjects (Education Week, 2008).

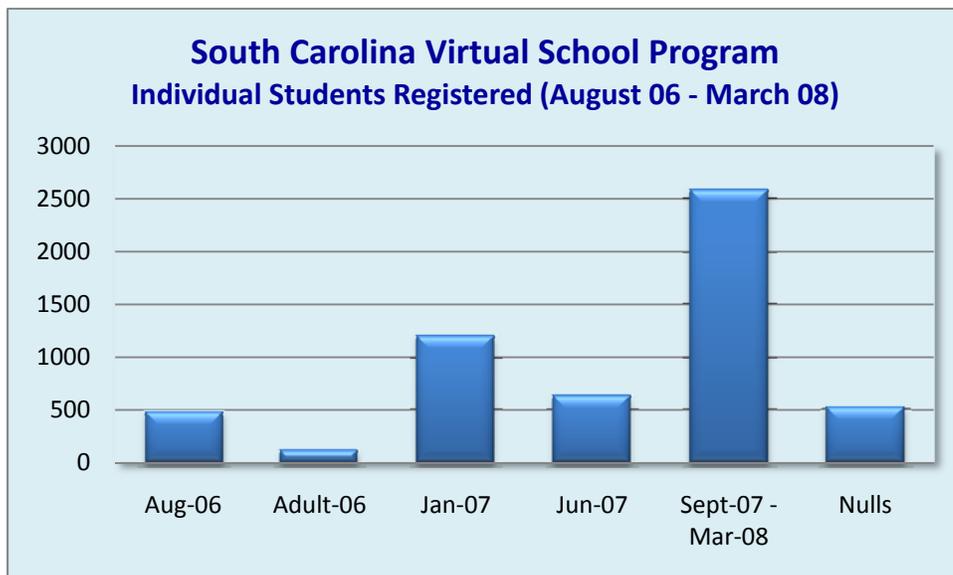
During this pilot, students throughout the state had the opportunity to enroll in 34 different virtual school courses, including algebra, geometry, English, Web design and global studies. The pilot gave SCDE an opportunity to gauge the need for and response to the program around the state. Additionally, the pilot helped gauge the Department's strength in supporting the South Carolina High School Redesign Commission's recommendation for the use of virtual learning to meet legislative mandates to give all students equitable access to high-quality instruction. When the Need Assessment was released in 2007, seven (7) key findings were revealed:

- Over 50% of respondents stated that utilization of online learning was a part of their school's overall school improvement/academic plan; with another 44% saying that online learning was a "very important" part of their overall improvement plan
- The two most commonly cited reasons as to why schools/districts chose to use online courses were:
  - To offer "catch up" curriculum for high school students
  - To increase graduation rates
- The participation rate of online courses for content-recovery purposes is approximately 70%; with approximately 55% also using online courses for first time full credit courses
- The reason most commonly given for students NOT enrolling in online courses is due to a lack of student awareness that online opportunities exist
- Providing online courses and remediation to students who were unsuccessful in a traditional classroom setting and for students needing remediation is rated as the highest need for online learning to address
- English I and Algebra I are the courses in which online content recovery is most needed
- Algebra I is the subject in which online remediation opportunities are most needed (North American Council for Online Learning, 2007).

While the pilot was underway, Representatives Rice and Walker – members of the South Carolina House of Representative’s Committee on Education and Public Works – pre-filed a motion on December 13, 2006, to establish the South Carolina Virtual School Program (SCVSP).

The K-12 School Technology Initiative has played a key role in supporting the mission of the SCDE’s Office of eLearning; to develop and deliver standards-based, student-centered online instruction. This instruction will expand educational opportunities to teach 21<sup>st</sup> century skills enabling a smooth K-20 transition. An additional goal is to offer professional development to instructors and expand the scope and depth of their instructional skills. The office of eLearning provides the educational opportunities needed in areas of the state where districts are limited by barriers of time, place and/or a lack of qualified faculty.

As of March 2008, a total of 5,550 individual students have registered for a SCVSP course. The total number of student registrations is based on data that were collected in early March. Since that time, the number of student registrations has continued to rise.



Following are several comments received about the SCVSP by students and educators that demonstrate the impact of this valuable effort:

One student stated:

**“I am taking these classes for a good reason. I needed English Three and Four classes. I didn’t have any other option. I am a working student after school, so that means I would not be able to stay after [school] for NovaNet. I am glad this program is here. Now I can graduate on time.”**

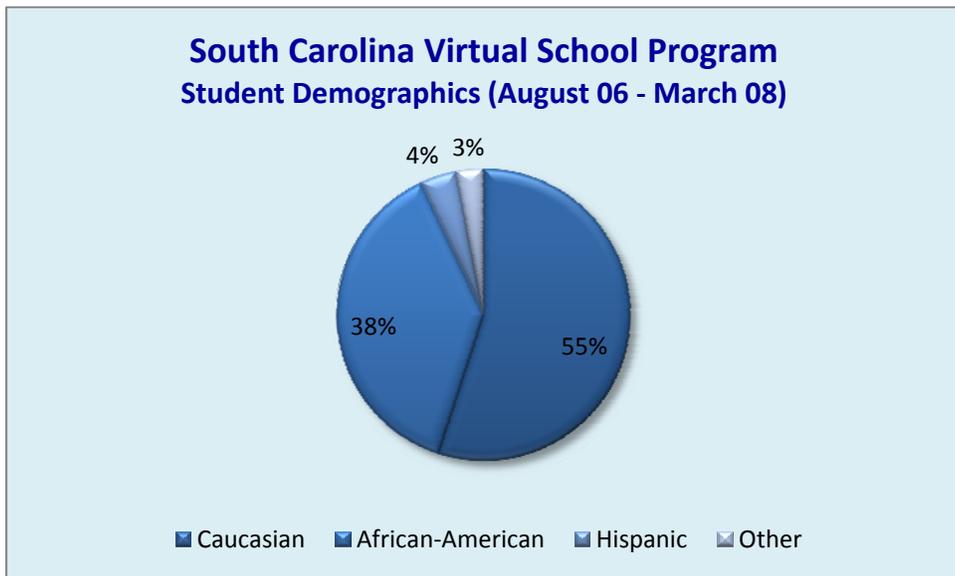
A student who was short on course credits wrote:

“I was going to take night classes at Tech to make up the classes [I had missed] then I found out I could take the classes here online, so I had my mom get me signed up and now I am on my final class.”

A guidance counselor contacted the SCVS Program to say:

“Thank you again for all of your help and your willingness to assist [student’s name] at this late date. He owes his being able to graduate tomorrow to you!”

The SCVSP serves South Carolina students from a broad range of demographic groups as illustrated by the graph below:



11

Another invaluable resource contributed to by the K–12 School Technology Initiative is Digital Information for South Carolina Users (DISCUS). Administered by the South Carolina State Library, DISCUS uses K–12 School Technology Initiative funds to help provide an electronic library of essential information and learning resources to all state residents through schools, higher education institutions and public libraries. Public libraries, along with K–12 school media centers and academic libraries, receive direct benefit from DISCUS.

Additionally, DISCUS provides citizens served by resource-constrained schools and libraries with the same high quality resources as those served by larger institutions. License renewal costs for the 2007-08 calendar year totaled \$2,357,374. Were each library to purchase access to DISCUS databases separately, the total cost would be \$41,357,374. The South Carolina State Library’s administration of this valuable and popular statewide program provides cost avoidance for South

Carolina institutions of over \$39 million dollars. DISCUS use by K–12 schools continues to rise exponentially.

Through DISCUS, users statewide have 24x7 office/home access to 33 DISCUS databases and 27 e-books. In 2007-08, residents accessed over 8.5 million items through DISCUS. This represents a 12% increase over FY 2006-07. DISCUS K-12 users retrieved over 5.5 million items – accounting for 64% of total use. This use reflects a 14.7% increase over the previous year.

**“DISCUS is the best gift the state can give to our learning community. We love it and we use it all the time.”**

*Karen Roach, Brockman Elementary School, Richland 1*

**“DISCUS has allowed my students to have access to a world of resources that I am unable to afford on my own. DISCUS connects my students to reliable resources in a safe online environment. The new look is very kid-friendly and allows students to navigate on their own.”**

*Sandy Bailey, Northwest Middle School, Greenville*

**“DISCUS has up-to-date materials for every curriculum area. These materials are formatted for multimedia, virtual and interactive purposes. My patrons can always find authoritative information quickly and be able to ‘cite’ the source for their instructors. You have added some fantastic databases this year that are ‘blowing’ my students’ minds. They always try DISCUS first or go back to DISCUS when they can’t find something easily on the Internet.”**

*Cathy Hilton, Clinton High School, Laurens 56*

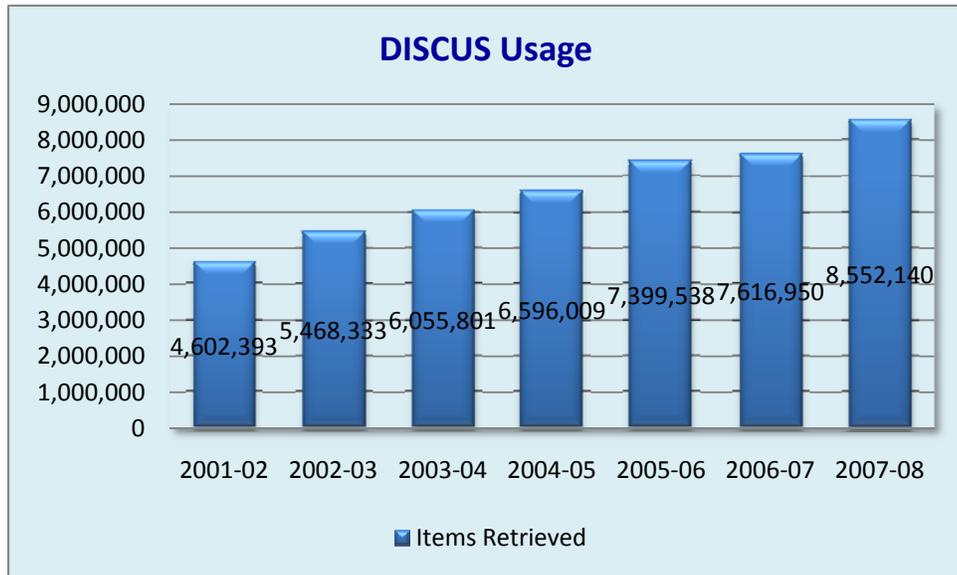
**“‘Go to DISCUS first’ is my kids’ motto.”**

*Elizabeth Gregory, John P. Thomas Elementary School, Richland 1*

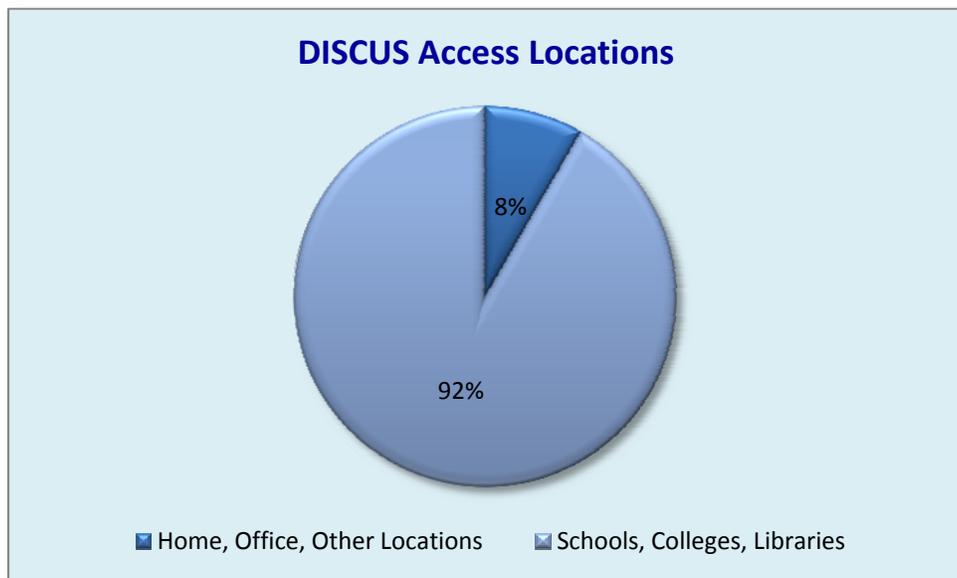
**“Students use DISCUS in my media center for research. Teachers have called me at home to access DISCUS for classroom assignments.”**

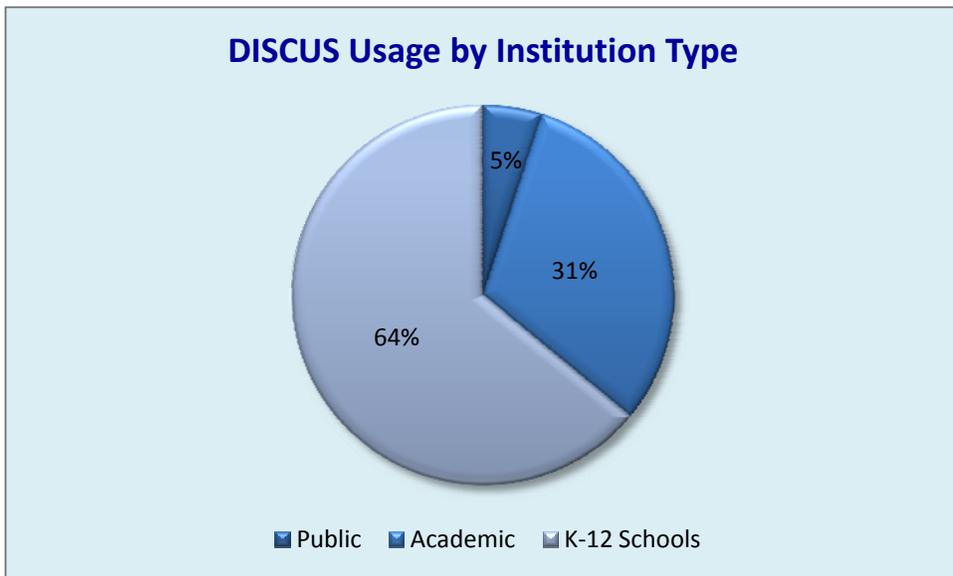
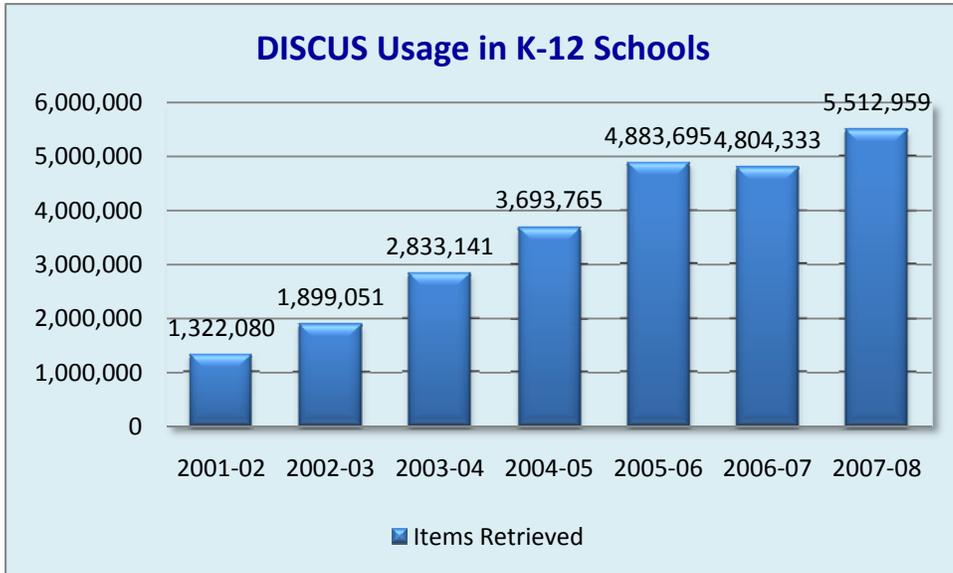
*Sylvia Witherspoon, Scott’s Branch Middle School, Clarendon 1*

The charts below demonstrate the increased 2007-08 usage numbers and millions of items accessed through the DISCUS program. Additionally, they show that DISCUS is being accessed through higher education institutions, public schools and from the home. The 24x7 availability of DISCUS enhances the learning environment for students both at school and at home.



13





South Carolina Educational Television’s (ETV) StreamlineSC is another immensely beneficial program for S.C. educators and students that directly enhances teaching and learning by using video-based content. ETV partners with SCDE and school districts throughout the state to produce video-based standards aligned content, containing over 40,000 video clips as well as a tremendous database of illustrations and photos. All schools access the service without charge through funding provided by the State and distributed by the K-12 School Technology Initiative.

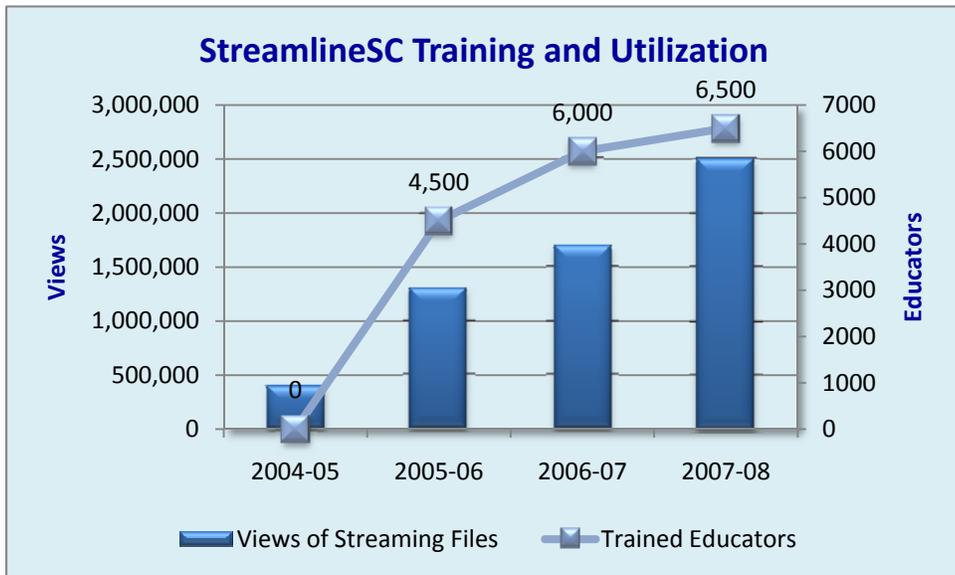
**“I use ETV’s StreamlineSC in my classroom as an aid with instruction. Students seem to recall more information when they have seen a clip from unitedstreaming. Please keep this service available for teachers. It is a VALUABLE resource. Thanks!”**

*Andrea Alerre, Wren Middle School, Anderson 1*



Teachers receive StreamlineSC training

The graph below illustrates the number of educators trained in StreamlineSC, along with the number of views of Streamline files. During the 2007-08 school year, over 2.5 million views took place while 6,500 teachers and staff were trained on the site.



Another important resource for providing enhanced video-based classroom learning is the use of Instructional Television (ITV) videos; a resource the K-12 School Technology Initiative has a rich history of supporting. ITV videos, cooperatively developed by the SCDE's Office of Technology and ETV, had a total of 133,124 views during the 2007 school year, an increase of over 32% from the previous year. Of the total videos viewed during the 2007 school year, ITV videos accounted for 6.1%, up from 5.0% during the previous year.

### Top 10 ITV videos and number of views:

1. Detective Bonz and the S.C. History Mystery: Part 4 – 4,105 views
2. Detective Bonz and the S.C. History Mystery: Part 1 – 3,581 views
3. Detective Bonz and the S.C. History Mystery: Part 5 – 3,552 views
4. Detective Bonz and the S.C. History Mystery: Part 2 – 3,215 views
5. Detective Bonz and the S.C. History Mystery: Part 3 – 2,809 views
6. Letter TV – 2126 views
7. South Carolina Geography: The Blue Ridge – 1,975 views
8. Earth Today – 1,895 views
9. Detective Bonz and the SC History Mystery: Part 6 – 1,773 views
10. South Carolina Geography: The Piedmont – 1,676 views



In April of 2008, ETV conducted a series of Teacher Technology Workshops designed to expose educators to many of the various technology tools available. More than 240 educators, representing 47 of South Carolina's 85 school districts, attended the workshops and received instruction in a variety of topics ranging from creating podcasts and videos to using such tools as Google Earth, SMART Boards and Kidspirational educational software.

The feedback received from participants was extremely positive and demonstrated the value of the workshops, which the K-12 School Technology Initiative helped to fund. Feedback received includes:

**"These are the best workshops I have ever attended during my career, not only this year, but last year's also – very, very professional. ETV's personnel are so welcoming also. Wonderful!"**

*Miguel A. Fleitas, Scotts Branch High School, Clarendon 1*

**"Excellent – keep up the good work. I will use many ideas to help prepare future teachers to use technology in the classroom in S.C."**

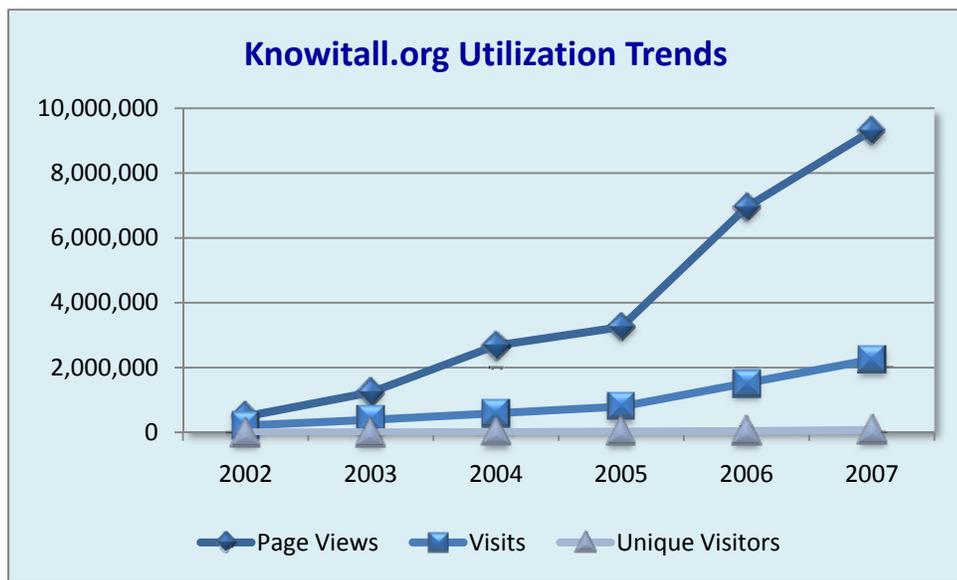
*Dr. Sandra McLendon, Southern Wesleyan University*

Yet another invaluable electronic resource widely used in South Carolina is ETV's Knowitall.org. Knowitall.org is the portal for ETV produced free, Web-based multimedia resources designed for K-12 use. The content includes interactive learning modules, simulations and virtual field trips, as well as lesson plans, classroom activities and media rich content. Knowitall.org also offers links to an array of additional resources, including sites dedicated to math and science, earth and life sciences, art and music, health and nutrition and South Carolina features.

This portal has been viewed over 10 million times by students, parents and teachers since it was developed, and of these users, 76% connected to Knowitall.org from the state's K-12 schools and districts. When at-home users are added to the equation, over 90% of use comes from within the state of South Carolina. In addition, site usage grew considerably in 2007, as annual visits increased nearly 48% and page visits increased by approximately 34%.

2007 was a year characterized by continued, remarkable growth in the use and acceptance of Knowitall.org as both a valuable tool for standards-based classroom learning and for the equally important informal learning model outside structured educational environments. ETV's Knowitall.org continues to grow due to the fact that it leverages many of the same features that attract students to the Internet and to the world of gaming and simulations. Scholarly research continues to indicate that education-driven gaming (also known as serious gaming) engages students at levels and in ways difficult to achieve in the highly structured classroom, while resulting in improved educational performance.

The graphs presented below provide a visual representation of Knowitall.org's increased site utilization and also illustrate several interesting observations. For example, during the course of 2007, the average number of unique visitors per month actually increased by an amazing 76%. This fact is exceedingly gratifying as the unique visitor metric is one that signifies an ever-increasing user base among teachers, students and parents. It is likewise important to note that the site has enjoyed explosive growth in all metrics over the last two years, even at a time in which many more options are available to users. During the two year period from 2005 to 2007, Knowitall.org's metrics indicate a growth rate between 180% and 190%.



With support from the K-12 School Technology Initiative, ETV continues to add cutting edge, standards-based content to Knowitall.org in such new and legacy sites as Road Trip Through South Carolina Civil Rights History, Knowitall Healthy, Career Aisle and Gullah Net to attract notice and acceptance outside the confines of South Carolina K-12 Education. The impact and success of Knowitall is highly evident in the following testimonial:

“Wow! What a wonderful resource for our South Carolina students! As a career development facilitator at Sanders Middle School in Laurens, S.C., I was very excited about this awesome new Web site! Many of our students have very limited experience with travel outside of our county and will no doubt enjoy learning more about (and feeling more connected to) the beautiful state in which they live by watching the many videos

When I first became familiar with the Web site at a conference at Lander University this winter, I immediately loved the bright colors and great graphics, and I planned to share it with my students as we began our career exploration phase of their career development, knowing that they would enjoy the site. However, after spending some time browsing through the site and sharing video clips with my own elementary-aged children, I am now aware that this Web site is much more than just a career exploration tool and now plan to share the site with all of our teachers and administrators when we return to school this August and encourage them to check it out. I think all subject areas from careers to history, science, English, arts, math, etc. seem to be well-represented in a manner which is so user-friendly, fun and attractive to kids!

Your team has done an exceptional job on this Web site and has created something to be proud of. I'm excited about sharing it with my co-workers when we return to school. Speaking as a mom and as a CDF, thank you so much for your efforts to provide such a special place for our South Carolina children to visit and learn.”

*Mary Whitman, Sanders Middle School, Laurens*

18

### Did You Know?



Every month during 2007, an average of 74,988 unique visitors connected to Knowitall.org's standards-based resources. Compared to the 2006 average, this represents an increase of 76% in one year! Continued funding for this initiative, pioneered by the K-12 School Technology Initiative, enables South Carolina ETV to continue to strengthen and diversify the offerings of Knowitall.org and to hold the loyalty of established users while attracting new enthusiasts from the ranks of the state's students and teachers.

## II. PROFESSIONAL CAPACITY

### South Carolina Technology Plan Goal:

The SCDE, school districts and individual schools will provide curriculum development and professional development to increase the competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can be used to increase student achievement.

### K–12 School Technology Initiative Efforts to Support the Goal:

K–12 School Technology Initiative efforts described in this section support legislative mandates that include the provision of teacher, administrator and counselor training as required by the iAm Laptop Pilot Program, the national STEM effort (Education Week, 2008), the No Child Left Behind (NCLB) Act, the Education Economic and Development Act (EEDA), the South Carolina Education Oversight Committee goals and the South Carolina Teacher Technology Proficiency Proviso. The Teacher Technology Proficiency Proviso mandates the following:

“The Teacher Technology Proficiency Proviso states that to ensure the effective and efficient use of the funding provided by the General Assembly in Part IA, Section 1 XI.A.1 for school technology in the classroom and internet access, the State Department of Education shall approve teacher technology competency standards and local school districts must require teachers to demonstrate proficiency in these standards as part of each teacher's Professional Development plan. Evidence that districts are meeting the requirement is a prerequisite to expenditure of a district's technology funds.”

19

Guided by the Teacher Technology Proficiency Proviso, K–12 School Technology Initiative funding is providing the opportunity for districts statewide to use an ePortfolio system for teacher technology proficiency assessment. The tool allows teachers to place themselves on an identified technology proficiency level and then receive recommendations for professional development that are aligned with the courses offered by the SCDE. These courses are also provided with K–12 Technology Initiative funding. Data provided thus far through the ePortfolio project has demonstrated the positive impact of technology integration in S.C. schools.

Approximately 5,700 teachers were assessed with the ePortfolio system during the 2007-08 school year. Of those, 52% percent were moved to the proficient level in the use of technology to enhance learning. As a result of this successful project, the technology expertise of South Carolina's educators has improved dramatically, providing the students in South Carolina with increased exposure to interactive learning, higher-order thinking skills, collaboration and enhanced communication skills.

South Carolina is one of 40 states whose standards for teachers include technology, and one of only 10 to require technology professional development for teachers. K–12 Technology Initiative funding has helped to enable the creation of high quality technology training for teachers.

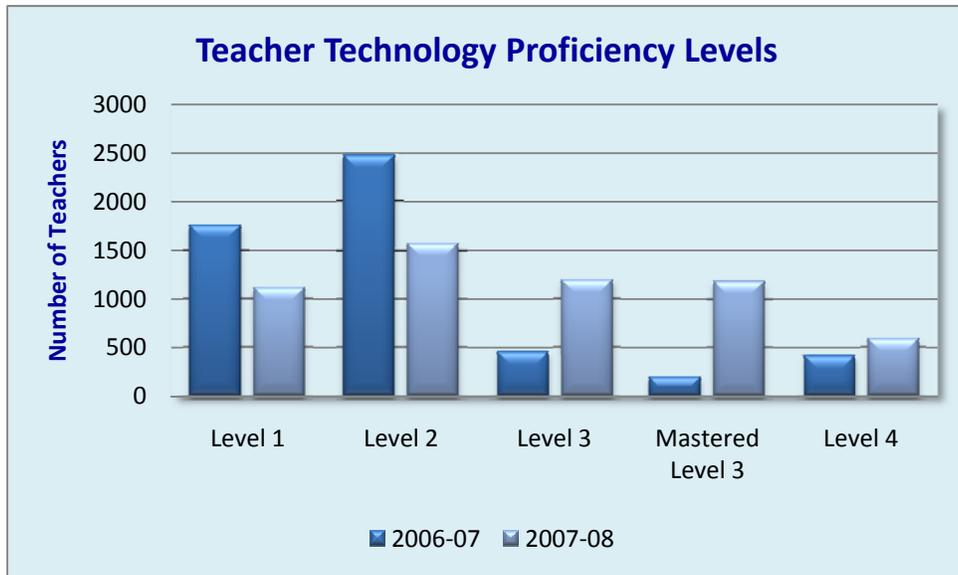
Bandwidth and adequate network infrastructure are needed in schools to provide high quality online training opportunities for educators. The pie graph below demonstrates the growing demand for online education in 2007:



The eLearningSC program, formerly known as the South Carolina Online Professional Development Program (SCOPD), has received national accolades for its growth and for making professional development a focus within the state, especially in high-poverty and high-minority schools. The program offers graduate and recertification credit courses for South Carolina educators. K-12 School Technology Initiative funding has completely supported the creation, development and growth of eLearningSC.

20

Results from the 2007-08 Technology Coaching Initiative, which at the onset included 5,638 teachers, showed a 514% increase in teachers who are technology proficient and a 44% increase in teachers who have reached the mentor level in technology, meaning they can now assist their peers. Results also indicate that 37% of these teachers moved past the beginning level to the productivity and proficient levels. These results are illustrated on the following page:



In a national survey of online learning policies and practices, South Carolina ranked 17<sup>th</sup>. The survey, which was conducted by the Center for Digital Education, was designed to examine the overall landscape of online learning in U.S. schools.

The Center’s findings were based on interviews with officials from each state and found that 15 states (including South Carolina) offer state-led programs, while 16 states provide multi-district online learning. Two states are in the planning stages and 17 presently have no online program. States were ranked to reflect the vision, policies, programs and strategies that are currently being used for online learning in order to meet the academic needs of students.

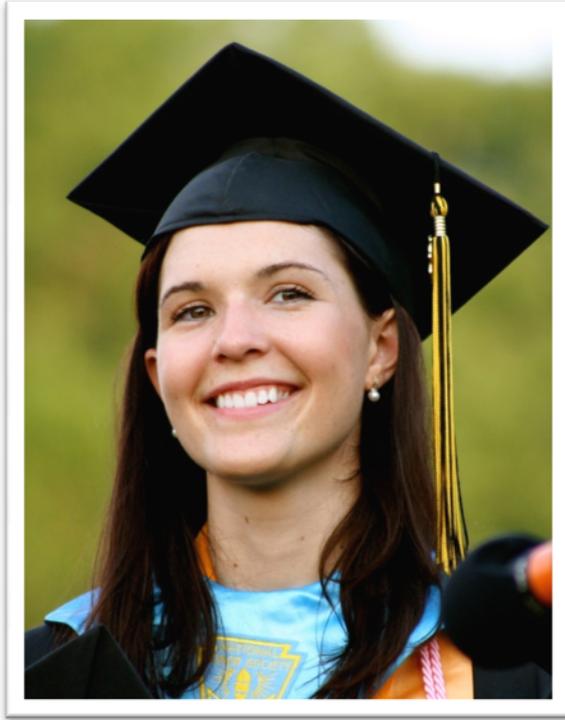
21

State Superintendent of Education Jim Rex pushed for expansion of South Carolina’s virtual school program for online learning in 2007 as part of his plan to offer students and parents more public school choice. “The virtual school gives more choices and flexibility in what, when and where students learn,” Rex said. “We’ve shown that the demand for online classes can be met without sacrificing quality or accountability. It’s a great example of using innovation to improve student achievement.”

South Carolina has enrolled nearly 7,400 students for online learning, with enrollment growth of 350 percent since the beginning of the program. The state earned favorable marks in the survey for allowing all students to have access to online learning opportunities, for making online learning part of school reform strategy and for offering teacher training online.

Unlike the online learning programs offered in some other states, South Carolina’s virtual school has structured curriculum aligned to state standards, state-certified teachers, testing and transcripts.

The Center for Digital Education said its survey and rankings show that online education will become more prevalent as states and school districts continue to face the challenges of meeting student achievement levels, finding qualified teachers and preparing the next generation for careers in science, technology, engineering and mathematics.



In order to assist with embedded technology professional development, K-12 School Technology Initiative funding supported the SCDE Technology Coach pilot which placed 28 trained technology coaches in schools with the highest demonstrated need. Increases in teacher technology use in the classroom to enhance learning have been a visible result of the technology coaching project. In order to provide up-to-date training for the coaches, the Office of eLearning provides monthly professional development to coaches. This professional development is provided with K-12 School Technology Initiative funding.

Another valuable professional development resource funded by the K-12 School Technology Initiative is OnePlaceSC, ETV's newest K-12 Educational portal which launched in August 2008. Teachers have a single sign-on to the Web site that allows them to search for quality

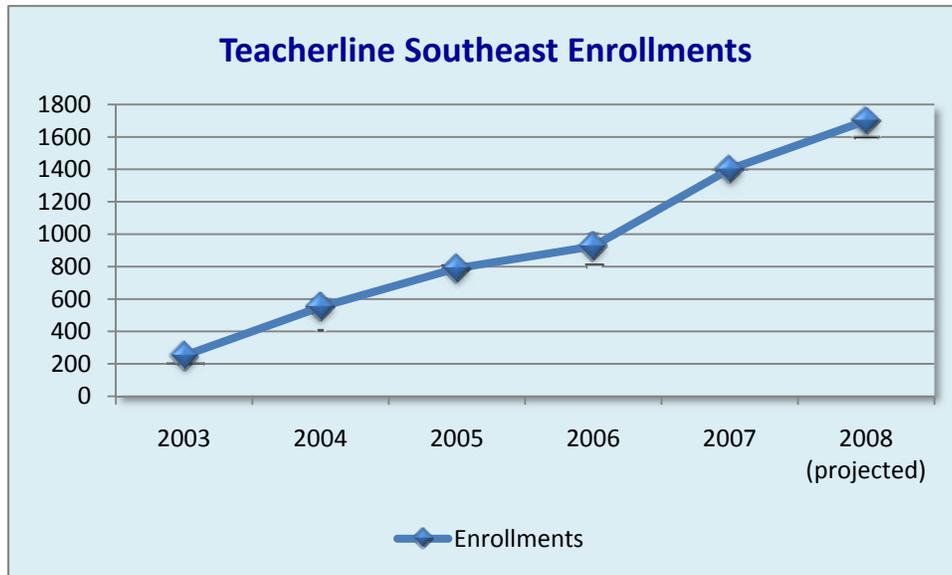
educational content, including Knowitall.org, StreamlineSC, Public Broadcasting Service (PBS) Teachers and Kids, Annenberg and Teachers Domain.

22

In addition to ETV resources, the site will make available ITV video resources and the South Carolina State Library's Digital Information for South Carolina Users (DISCUS) content sites. OnePlaceSC also contains a television guide feature displaying all of ETV's satellite and broadcast live programming which can be streamed on-demand, including current staff development programs. Reporting features provide information on which resources are used and by whom.

Another way that ETV uses K-12 School Technology Initiative funding is through the provision, development and management of TeacherLine Southeast. TeacherLine Southeast provides online solutions for teacher professional development in the states of Georgia, North Carolina and South Carolina through the delivery of PBS TeacherLine courses.

These courses, considered the premier research and standards-based professional development resource for pre K-12 teachers, have been increasingly popular and enjoyed tremendous growth in enrollment. In all, over 3,000 students have participated in the courses including an 86% increase in enrollment in the fall of 2007.



ETV uses K-12 School Technology Initiative funding to help support educator professional development efforts. These efforts currently center on the Knowitall.org portal. Knowitall.org content is incorporated into several existing sites including ETV’s OnePlaceSC, the PBS Teachers portal, the WGBH TeacherDomain Open Resource Archive and the South Carolina State Library SchoolRooms portal.

In addition, ETV has been approached by a number of state and regional groups to collaborate in the development of additional educational resources based on the Knowitall.org model. Such groups include the Pee Dee Land Trust, the Culture and Heritage Museums of York County, the State Museum of South Carolina, the Columbia Museum of Art, the Houston Children’s Museum, Congaree National Park and the Oregon-based Center for Coastal Margin Observation and Prediction.

The Instructional Television (ITV) team in the SCDE’s Office of eLearning is responsible for the development, acquisition, scheduling and utilization of instructional television resources used in the public schools by students, teachers, administrators and staff. ITV and ETV have a well-established partnership, which ensures that educators are involved in the curriculum content and gives ETV responsibility for the production and delivery of ITV programming. ITV works collaboratively with ETV to provide a number of initiatives including instructional television, supplemental resources, distance learning courses for students, teleconferences for students, staff development for educators and staff and recertification courses for teachers and administrators.

Content specialists at SCDE work with ITV to locally produce and develop professional development programs, teleconferences and recertification courses for the state’s educators with the help of K-12 School Technology Initiative funds. Content ranges from specific training to programming that can be used with the school community. These efforts are then produced by ETV and disseminated free to our schools via satellite or online.

Below are a few examples of the successful professional development programs offered to educators by ITV and ETV:

- Career Education in Middle Schools (three 18-minute programs)
- Charter School Board Orientation and Overview (four 1-hour programs)
- Educating Without a Home (1-hour program)
- EIC-Using the Environment as an Integrated Context for Learning (57-minute program)
- Global Career Development Facilitator Training (nine 1-hour programs)
- Palmetto Leaders (five 5-minute segments)
- Research to Best Practices: Professional Development in Special Education (six 1-hour modules)
- Re-Thinking ADEPT (four 1-hour programs)
- S.C. Alternative Assessment (SC-Alt) for Experienced Educators (90-minute program)
- S.C. Award-Winning Schools (twelve 20-minute programs)
- S.C. Teachers on Teaching (ten 15-minute programs)
- S.C. Virtual School Program Update (12-minute program)
- School Bus Safety (one 25-minute program)
- Sharing Her Story: A Special Education Teacher (30-minute program)
- The Education and Economic Development Act's Palmetto Pathways to Success and IGP Conferences (six 10-27 minute programs)

24

On-going monthly and quarterly professional development teleconferences and programs are produced locally by ITV with ETV. These series are created with SCDE content professionals working with ITV.

Below is a list of programs produced in 2007-08 with the help of K-12 School Technology Initiative funding:

- African American Curriculum Resources (four 1-hour programs)
- Assessment Informational Overview (eight 1-hour programs)
- Carolina Careers Career Guidance Teleconferences (nine 1-hour, 15 min. programs)
- Library Media Specialists Start-up Meetings (two 4-hour programs)
- Library Media Specialists Town Meetings (six 1-hour programs)
- SCASL Teleconferences (four 1-hour programs)
- School Health, Nutrition and Physical Fitness: Making IT Happen! (seven 1-hour programs)
- Social Studies Curriculum Topics (two 1-hour programs)
- Teaching and Learning Language Collaborative (ten 1-hour programs)
- ESOL Information Updates (five 1-hour programs)



*Teachers engage in a discussion during an ETV workshop*

The South Carolina State Library offers technology integration professional development for educators through a variety of means including DISCUS workshops and orientations, presentations to the University of South Carolina's School of Library and Information Science classes, exhibiting at school instructional fairs and technology forums, presentations to the South Carolina Independent Schools Association, the Education Through Technology Summer Institute and more.

K-12 School Technology Initiative funding was used effectively by all partners to make great strides in South Carolina in providing technology professional development and supplying the vehicle to offer all types of online professional development to educators. Through training opportunities and electronic resources, teachers and administrators learned how to implement research-proven strategies to enable the effective integration of technology to support and enhance student achievement.

### **Did You Know?**



South Carolina's online learning program was ranked 17<sup>th</sup> in a national survey conducted by the Center for Digital Education. South Carolina, with nearly 7,400 online students enrolled, has experienced a growth of 350% since the program's inception.

### III. INSTRUCTIONAL CAPACITY

#### South Carolina Technology Plan Goal:

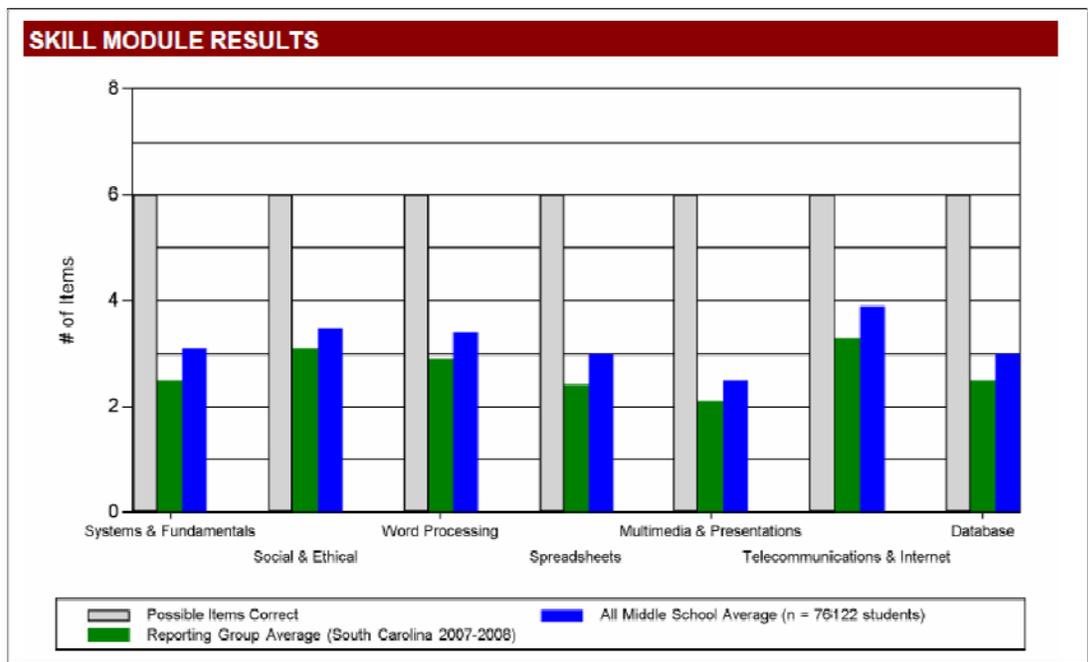
The South Carolina Department of Education (SCDE), school districts and individual schools will use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

#### K-12 School Technology Initiative Efforts to Support the Goal:

Students must be provided with adequate technology tools and appropriate environments to learn effectively. Such technology must be in place in order for schools to teach science, technology, engineering and mathematics (STEM) as stressed in the SCDE Math and Science Hub’s STEM Initiative. The K-12 School Technology Initiative has actively supported and increased instructional capacity in South Carolina schools by allowing districts to meet state and federal legislative mandates addressed under this dimension.

The provision of online learning, the supplying of data to school leadership and teachers along with tools for data analysis, and moving the state toward computer-based assessment are all important initiatives supported by partner activities and efforts.

The No Child Left Behind Act (NCLB) goal which states that “every student shall be technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location or disability,” prompted the SCDE’s Office of eLearning to administer a technology literacy assessment to over 1,800 students from throughout South Carolina. These students – chosen from varying programs such as E2T2, lottery-funded and laptop districts – were rated below the middle school average in all six of the technology skill areas. The results of the assessment are illustrated below:



Another initiative that the K-12 School Technology Initiative supports is one that will help to ensure that South Carolina's students will be better prepared to be effective in the 21st century. The SCDE's Office of eLearning, using K-12 School Technology Initiative funding, has developed grade-level assessments, resources and portfolios for K-8<sup>th</sup> grade. This new student technology assessment system will be available to school districts during the course of the 2007-08 school year.

K-12 School Technology Initiative funds also support current technology, including television through school cable systems, satellite and the Digital Education Services (DES) centers, formerly known as Distance Education Learning Centers (DELIC). Each DES is equipped to broadcast a minimum of four TV channels simultaneously with educational resources that can support each school's instructional needs. In addition, K-12 School Technology Initiative funding helped build ETV's satellite, DES infrastructure, and also funds ETV's Educational Technology Service to maintain systems.

K-12 School Technology Initiative funding also helped develop the largest closed-circuit television system in the nation. This system is delivered through broadcast technology that is poised to migrate into a robust state-wide broadband Internet cloud. These educational channels use the Education Broadcast Services (EBS) spectrum, and due to FCC re-regulation and changes in technology the state and ETV now have the opportunity to utilize the channel's excess capacity by leasing to wireless broadband Telcos. The legislature has formed an EBS commission, which is currently in the process of issuing and negotiating a Request for Proposals to lease the excess capacity.

27

Funding provided through the K-12 School Technology Initiative also helps to support current and legacy technologies, as well as provide for the means of transitioning to and supporting emerging Web-based technologies. Current and legacy technologies include standard format television through school cable systems, satellite and DES.

Part of this technological migration was the change of the DELIC to DES. At the center of DES technologies are IP media distribution systems that deliver educational content via each school district's wide-area-network (WAN) and allow for random access to content for the entire school district user community. Another noteworthy aspect of these technologies is the portability of the "transmitter" – allowing for educators, or any presenter, to broadcast from any location within the district – removing the requirement that a presenter always be in a specific location to originate the broadcast.

DES core technologies allow for a broadcast minimum of four channels of content simultaneously with educational resources that can support each school's instructional needs. Through the use of these technologies, it is quite easy to add additional channels of content and to upgrade as the underlying technologies improve.

Satellite distribution, supported by the K-12 School Technology Initiative, continues to be a cost effective delivery system to support a wide range of learners. ETV's satellite system provides distribution of educational and instructional programming to a wide range of areas including K-12 public schools, colleges, universities, state and local government agencies, state law enforcement agencies and the state emergency preparedness service. The facts that follow clearly demonstrate the valuable services ETV, with support of the K-12 School Technology Initiative, provides to the educators in South Carolina.

- ETV has invested in satellite receivers in all 1,100 K-12 schools used for services ranging from teacher re-certification to critical needs curriculum for students.
- ETV has 53 Digital Education Service (DES) centers serving 85 school districts that utilize satellite delivery to keep ITV programming current.
- More than 170 state agency locations used ETV's digital satellite downlinks to meet their training needs last year.
- South Carolina's public colleges used ETV's satellite to offer students 177 college credit courses in associate, four-year and graduate programs.
- If satellite service were not available, city, county and state government would have significantly higher training costs.
- As an added value, the Governor's State of the State address and other important statewide events are fed live via ETV's satellite and rebroadcast to schools and television newsrooms throughout the state. During the legislative session, the Senate and House of Representatives activities are fed by satellite from the State House complex to higher education and agencies statewide. In addition, ETV provides these legislative feeds to all news outlets in the state.

K-12 School Technology Initiative funding also helped to further develop and improve upon ETV's digital satellite, DES infrastructure, DES IP distribution technologies and to fund ETV's Education Technology Department (ET) to assist in maintaining systems and infrastructure including:

28

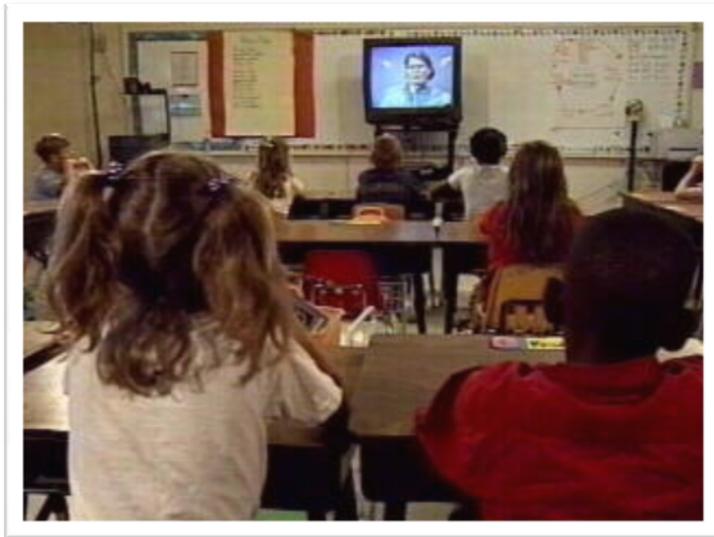
- 33 district centered IP media distribution systems
- 53 Distance Education Service (DES) centers, formerly known as Distance Education Learning Centers
- 67 four-channel EBS systems
- 38 EBS transmit antenna systems
- 40 EBS transmit and STL towers
- 679 EBS receive sites
- 528 EBS receive towers
- 1,235 satellite downlinks at K-12 schools and school related facilities
- More than 1,500 satellite receivers at K-12 schools and school related facilities
- More than 1,000 open circuit antennas at K-12 schools and school related facilities
- School Building Distribution System design, construction, maintenance, modification, and all associated support
- New school construction design review, policies, consultation during construction phases and final inspections and reviews
- EBS and IP media distribution installation, maintenance, modification and all associated support
- IPTV distribution systems that deliver ETV content to K-12, higher education and other users in the educational community

Emerging technologies and new Federal Communication Commission (FCC) regulations are driving plans to transition the current technologies to meet the ongoing needs of the educational community. For example, new digital satellite data stream technologies need to replace present

one-way transmissions, as well as the Federal Communication Commission’s mandate to transition the analog digital education infrastructure to a wireless digital 2-way service.

These and other emerging technologies will require more effective interactive and accountable educational content. Additional K–12 School Technology Initiative funds will be needed in order to create and manage quality programming that result in measurable learning.

The Division of State Information Technology (State IT) utilizes K–12 School Technology Initiative funding to provide the mission-critical telecommunications network and Internet connectivity for K–12 schools and public libraries statewide so that appropriate instructional capacity can be achieved in South Carolina’s schools. Without this connectivity, schools and students would not benefit from



key initiatives such as the South Carolina Virtual School program and StreamlineSC that enhance teacher, administrator and student learning.

K–12 School Technology Initiative funding also played a critical role in ensuring that the Palmetto state was one of the first five states in the country with telecommunications connectivity including a statewide network and Internet access provided to all K–12 schools. In addition, South Carolina was one of the first states in the country with connectivity to all public libraries.

As a result of this achievement, 100% of the schools in South Carolina meet the CEO Forum’s standard of “high-tech” schools for connectivity. The CEO Forum determines technology readiness through an assessment which ranks schools, districts and states on four levels. The “high-tech” score is the highest an educational entity can receive. These are accomplishments for which each South Carolinian can be proud.

In 2007, the South Carolina General Assembly appropriated funds to initiate the iAm Laptop Project, a venture designed to provide a laptop computer for every ninth grader in six pilot schools located across the state. Working with technology is a requirement for almost all future jobs, and as such, students must possess the necessary skills and knowledge to be competitive in such a workforce. By providing students with the tools they’ll use every day in their jobs, the state is giving them more than a computer – they are providing daily training. Teachers are also provided with computers and incorporate the use of technology into their lesson plans.

The goals of the program are to enhance educational opportunities for students; increase South Carolina’s workforce competitiveness and engage ninth grade students to take ownership and responsibility for their futures. In addition, each school district has its own achievement goals that include improving test scores, average grades and graduation rates. The students will keep their computers throughout high school and, if adequate funding is available, each incoming ninth grade class will receive laptops until the school is immersed in the laptop environment. To date, there are

two grades participating at the pilot schools. Additional funding will be required to continue the program.

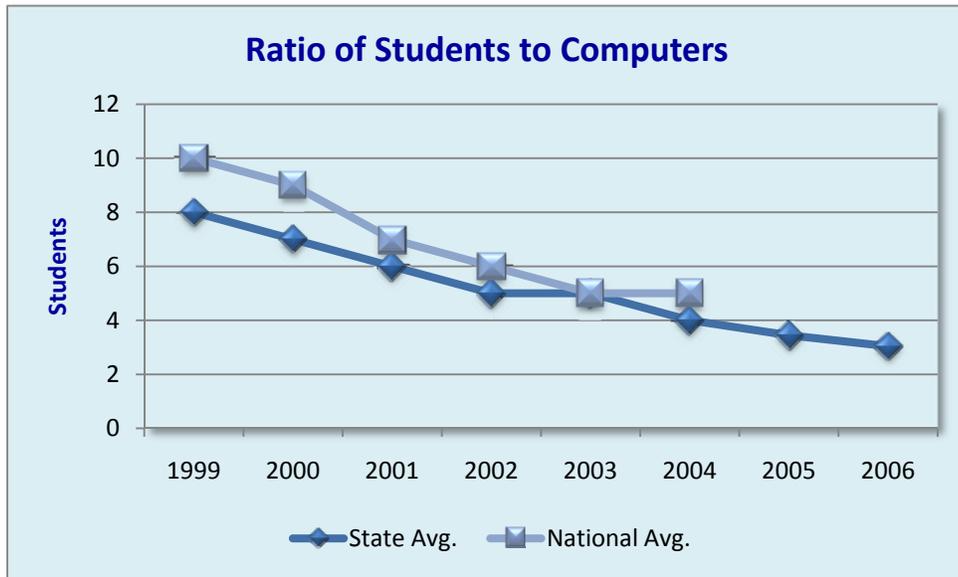
In order to evaluate the project, the Strom Thurmond Institute was selected to evaluate quantitative and qualitative measures that affect the program's success. Assessment of student grades would be incomplete without also evaluating the extent to which teachers are using technology in their classes. In addition, district spending on technology and professional support is also considered. The evaluation's goal is to do more than determine how well the students perform with laptops; the goal is to determine how to best immerse a school with technology to maximize achievement for all.

K-12 School Technology Initiative funding has historically enabled South Carolina to surpass the national average for student per computer. Unfortunately, however, according to the Education Week's 2007 Technology Counts survey, this ratio has declined over the course of the past two years to the point where the state and national averages are identical at 3.8 students per computer. While the ratio of students to computers are matching, the numbers tell a different story when dissected into adequate computers (less than 18 months old), moderate computers (more than 18 months old but less than 48) and low end computers (more than 49 months old).



Essentially, while our students have access to computers, the capacity of these computers to run critical programs such as StreamlineSC, Virtual School courses, computer-based assessment and other system demanding hardware is lacking. The need for robust multimedia rich computers to support today's curriculum with video, audio and digital images is paramount. The legislature is moving South Carolina in the right direction in the areas of virtual learning and online assessment, however, adequate technology must be provided to support these applications and initiatives throughout the state.

The chart below illustrates the progress South Carolina has made in providing computer access for South Carolina students:



Since 1999, a grand total of more than \$31 million dollars has been appropriated to school districts to purchase needed hardware and software to effectively use the connectivity provided. The portion of appropriated dollars available to flow-through directly to districts must increase to allow schools to purchase computers to handle the rich array of digital resources available.

### Did You Know?



Clemson University's Youth Learning Institute (YLI) hosted children from all 46 counties in South Carolina during this past summer. Creativity, problem-solving skills and real-world applications were developed as campers learned to use technological devices such as global positioning systems (GPS), personal digital assistants (PDA), video and digital cameras, editing software, Lego robotics, radio-controlled cars, video games and more.

## IV. COMMUNITY CONNECTIONS

### South Carolina Technology Plan Goal:

The South Carolina Department of Education (SCDE), school districts and individual schools will increase student achievement through the use of technology, including assistive technology, by maximizing community involvement and community partnerships.

### Partnership Efforts to Support the Goal:

The K–12 School Technology Initiative partners have used funding to provide services that allow districts to meet state and federal legislative mandates addressed under the Community Connections area. Programs support legislation from the Education and Economic Development Act (EEDA), provision of Web-based information for parents and guardians, providing data to community leaders along with tools for data analysis, and using virtual learning to positively impact all learners in South Carolina.

South Carolina Educational Television (ETV) has engaged in many educational partnerships in order to provide resources and learning not only to the students, but to their communities as well. Many of these community programs are listed below.

**Ready To Vote** – Ready to Vote is an ongoing campaign designed to encourage first time voters in high school and college to participate in general elections. The Ready To Vote Pod Squad visits high schools in order to educate students about the importance of voting and holds first time voter registration drives. The Ready to Vote Web site includes video, photo and news on candidates.

**Knowitall Healthy!** – Knowitall Healthy! was created to provide resources to support the objectives of the Student Health and Fitness Act of 2005, which established physical education, school health services and nutritional standards for schools. Three agencies, the South Carolina Department Education, the South Carolina Department of Health and Environmental Control and ETV, have developed an on-going comprehensive campaign for public awareness and new research that illustrates the significant relationship between academic achievement and physical fitness.

The need for increased health and fitness levels in the state is evidenced by the fact that the Palmetto State ranks tenth in the United States in the number of overweight and obese people, while the number of overweight children in the state has tripled since the 1960's. To further illustrate the need for better health, South Carolina ranks first nationally in the number of strokes, third in heart disease and tenth in diabetes. In addition, for the first time in over a hundred years, the current generation will have a shorter life span than the previous generation due to a sedentary lifestyle.

To help combat this crisis, ETV has made considerable efforts to draw attention to the need for healthier living by creating a Web site, providing professional development for educators, creating public service announcements featuring Smart Cat, providing online workshops and offering a weeklong series of programs and events in the fall of 2008 centered around the theme “Caution, Is Living in South Carolina Dangerous To Your Health?”

**Career Aisle** – Career Aisle is a new career development Web site created to support the EEDA by providing resources for guidance professionals, parents and students in grades K-12 in the development of successful career strategies for students. The site features virtual job shadowing and video links to numerous online resources as well as areas for elementary, middle, high school, parents and professional guidance staff which make searching easy. In addition, videos are being produced in each of the 12 geographic regions in partnership with the Regional Education Centers to highlight careers in local communities.

The South Carolina State Library has also developed a number of educational initiatives that have proven to be beneficial for the K-12 students of the Palmetto State. Communities throughout South Carolina have access to educational information designed to support schools, students and learning through the South Carolina State Library’s Digital Information for South Carolina Users (DISCUS) initiative. This initiative, made possible by a combination of K–12 School Technology Initiative and State Library funds, provides all South Carolinians with access to an electronic library of essential information sources.

“DISCUS has allowed my students to have access to a world of resources that I am unable to afford on my own. DISCUS connects my students to reliable resources in a safe online environment! The new look is very kid-friendly and allows students to navigate on their own!”

*Debbie Jackson, Gilbert Elementary, Lexington 1*

“I promote DISCUS by highlighting appropriate databases individually during 3<sup>rd</sup>-5<sup>th</sup> grade scheduled LMC times. For example, recently I demonstrated the features of NBK and gave students bookmarks with instructions for access at home via DISCUS.”

*Peggy Harrison, Springfield Elementary School, Greenwood 50*

### Did You Know?

Knowitall.org’s Ready To Vote, which is designed to encourage soon-to-be voters to become engaged in the electoral process, hosted the first gubernatorial debate between Mark Sanford and Jim Hodges in 2003 and won a Gracie Award from the American Women in Radio and Television for its Ready To Vote 2004 Teen Forum.



## **V. SUPPORT CAPACITY**

### **South Carolina Technology Plan Goal:**

The South Carolina Department of Education (SCDE), school districts and individual schools will expand and support technology resources to assist educators and learners in meeting the state academic standards.

### **K-12 School Technology Initiative Efforts to Support the Goal:**

Legislative mandates addressed under this dimension include the No Child Left Behind Act (NCLB), the Education and Economic Development Act (EEDA), South Carolina Education Oversight Committee goals, the implementation of online learning, enabling computer-based assessment and providing data to school leadership and teachers along with tools for data analysis.

The K-12 School Technology Initiative has a long history of helping districts acquire the hardware, software, connectivity and infrastructure to support educational applications, electronic resources and instructional technologies. Adequate tools, support, infrastructure and bandwidth are essential for enabling state schools to teach science, technology, engineering and mathematics (Education Week, 2008), which is an effort taking place in the nation's schools designed to enable the United States to remain competitive in a global economy.

K-12 School Technology Initiative funds provide support of ETV's Educational Technology Department (ET) – formerly Network Technical Services (NTS) – and are primarily responsible for supporting the program delivery needs of the state's K-12 school community. This support includes the planning, installation and maintenance of all equipment necessary for the schools to receive television programming, regardless of the delivery method. ET also offers schools services that include reviewing and approving plans and specifications for new or renovated schools to ensure compliance with ETV established guidelines for television building distribution system. ET maintains school television building distribution systems including the repair or replacement of amplifiers, filters, modulators, cable and connectors. They also provide and install satellite downlink and receivers at new schools, relocate or remove satellite downlinks and receivers at renovated or closed schools, relocate or remove ITFS receive towers at new or renovated schools and assist with the installation of school provided VCRs, DVDs, cameras, etc.

ET is also responsible for issues and questions regarding ITFS/EBS licensing, use of the spectrum or any other changes to tower placement, construction or removal. In addition, the department serves as the point of contact for EBS transition information, is responsible for the creation and implementation of all EBS spectrum transition policy as it relates to education in the state and maintains and supports all EBS related infrastructure.

The Education Technology Department serves as the technical lead for all ETV IP distribution systems that are currently installed, or planned for installation, across the state and also serves as the technical point of contact for all new satellite receiver installations.

The Division of State Information Technology (State IT) is responsible for the administration of the federal E-rate program funds and the appropriated K-12 School Technology Initiative funds that

provide network access to connect public schools and libraries with wide area networks (WANs). These networks meet local needs and connect each district and main library to the main South Carolina network, which links each to state resources and provides connectivity to the Internet. This support is essential for the implementation of online learning, enabling computer-based assessment and providing data and analysis tools to South Carolina schools.

As the technology needs of the educational system in South Carolina have grown, State IT has made changes in the design of WANs to take advantage of new telecommunications technologies that deliver more bandwidth to the schools and libraries. Statewide bandwidth requirements have grown substantially since the statewide network was created during the late 1990s. Original local bandwidth to a school or library was 64 Kilobits (kb) with a T-1 link to the Internet at each district. Today, the bandwidth for WAN links from all schools to the district office is over 10 Megabits (unless local facilities do not allow this speed) with many at 100 Megabits or higher.

Each of the school districts in South Carolina has at least 10 Megabit Direct Internet Access (DIA) links with the statewide average DIA speed at 20 Megabits. Even with the increased average, the majority of school districts are still requesting additional bandwidth. Library systems throughout the state have at least a T-1 link (1.5 Megabits) and 36% currently have, or have requested, a 10 Megabit link to serve the over 5,000 computers used by library patrons statewide to access the Internet.

In order to maintain some method of ensuring that the explosion of Internet bandwidth demand is truly serving educational needs in South Carolina, the K-12 School Technology Initiative Committee has approved the implementation of a new service offered by State IT to provide security and monitoring of the Internet bandwidth utilization. An additional aspect of the service provided by State IT is to assist school districts with the detection, prevention and handling of security breaches and/or virus attacks as most districts do not have sufficient resources to deal with this ever increasing threat on their own.

35

**“The need for ensuring the privacy and protection of students, teachers and information alike in the K-12 community is job one. Ensuring that networks are serving the educational needs of each district is challenging to say the least, however, by joining together – with the districts taking the lead – we have been able to accomplish much more together than any one district could hope to by themselves.**

**The Security Operations Center has the purview of the entire state, enabling security information to be shared throughout South Carolina. This allows districts to concentrate on the day-to-day delivery of services with the confidence that someone is watching to be sure that their networks are secure.”**

*Jim MacDougall, Chief Security Officer, State IT*

As an additional means to control the runaway cost associated with the explosion of bandwidth demand, State IT and the K-12 School Technology Initiative have developed an Internet policy to address specific requirements that must be met before appropriated or E-rate funds can be used to

increase bandwidth. This policy is intended to provide equitable use of available funds to supply sufficient Internet access bandwidth to all districts, while still allowing those districts who have other funding available to expand their Internet bandwidth at the district's expense.

With decreased funding and increased technology needs of the schools, the K-12 School Technology Initiative is facing many cost-related challenges including:

- Tight budgets at state and local levels
- Unknown financial impact from recent E-rate audit findings
- Managing requests for bandwidth increases
- Increased bandwidth leading to higher monthly costs

K-12 School Technology Initiative funds will play a vital role in sustaining and refreshing South Carolina's technology in order to maintain hardware, software, connectivity and infrastructure. Alarming, according to Education Week, South Carolina is one of many states with no plan or mechanism to regularly update technology as the point was made that technology must be regularly updated or replaced in order to remain an effective tool for learning.

In addition, the South Carolina Tech Think Committee convened in 2008 to examine the capacity that South Carolina's schools must integrate technology into instruction and recommend the improvements needed to enable computerized testing. This report, written by state business and education leaders, emphatically states that the most immediate need in the K-12 technology infrastructure is an increase in the broadband capacity and wireless access for student and teacher use. According to the Tech Think Committee, "the very backbone of technology in South Carolina schools – routers, switches, cabling and servers – need upgrading or replacement from the early state-provided system." (2008). It is crucial that the State support the cost and renewal of the software utilized in schools and districts to provide instruction, meet reporting needs and support the daily functions of the education system. In addition, according to South Carolina Tech Think Group (2008):

**"South Carolinians would never think of supplying a school with only three pencils per classroom; nor can the state consider only two or three computers per classroom to be adequate. Yet in a recent Data Recognition Study of the State infrastructure (2007), 73% of the state's schools reported three or fewer average number of computers for student instruction per classroom. These statistics indicate that we expect seven students to be able to make use of one computer, if the class size is 21. However, in the world of work, individuals rarely share computing devices."**

*South Carolina Tech Think Group (2008)*

In the area of student administration and data collection, South Carolina is one of only a handful of states to utilize a uniform student administrative system – SASIxp. K–12 School Technology Initiative funding allows use of SASIxp and provides funds that are imperative for training districts in the effective use and management of this data tool. South Carolina is on course to be one of the first states in the nation to implement systems that will enable local, state and federal government to make data-driven decisions through unique student identification and longitudinal data tracking. K–12 School Technology Initiative funding is critical in making the Student Unique Identifier Project and the Longitudinal Data System realities.

South Carolina compares favorably to other states in the number of public classrooms connected to the Internet. This connectivity allows teachers to deliver digital content to their students, thus opening a whole new realm of teaching and research possibilities. Presently, 100% of schools and libraries have T-1 or greater connectivity.

K–12 Technology Initiative funding also provides technical professional development courses on SASIxp, which are needed to ensure accurate reporting from the districts in order to meet important federal reporting requirements such as Adequate Yearly Progress. Because of such funding, South Carolina was highlighted in Education Week’s Technology Counts as having state funding specifically allocated for educational technology. South Carolina’s two major priorities for technology spending were listed as Internet connectivity and data management which postures the state to meet No Child Left Behind Act mandates focusing on data analysis tools.

“South Carolina’s districts usually use their equipment until it dies. Some poor districts maintain computer labs by using hand-me-downs from districts that can afford to upgrade. While this practice puts computers in the hands of students who otherwise would not have them, these old machines lack the memory and speed needed for many of today’s education software programs, participation in the state’s virtual school or handling computer-based assessment.”

*South Carolina Tech Think Group (2008)*

### Did You Know?

The annual amount for E-rate is now between \$14 and \$16 million, with network connectivity accounting for \$8.3 million of the appropriations.



## CONCLUSION

As this report demonstrates, every effort must be made to ensure that South Carolina's students, educators and leaders are technologically proficient through the use of adequate technology resources, digital education and robust infrastructure. The future of our state will depend on this commitment to preparing South Carolina's students for a sophisticated, global and technology-based world.

In July of 2008, a think tank of South Carolina's best and brightest educators, policy makers and technologists made the following recommendations to the General Assembly (South Carolina Tech Think Group, 2008):

- The State should provide funds for the K-12 education's digital information systems so that infrastructure, human resources and professional development meet national "moderate or satisfactory" efficiency standards.
- The State should provide instruction that embeds digital information systems and assessment in all of our schools.

The K-12 School Technology Initiative supports and applauds the efforts of the Tech Think group. The initiatives and programs guided by the K-12 School Technology Initiative support building an adequate infrastructure and implementing effective educational technology.

38

In South Carolina, we must have the same vigor and proactive approach to educating our youth as other education and business leaders in the U.S. and around the world. According to the Tech Think Report (2008), other states and nations are moving quickly to provide financial support to ensure their students can take advantage of today's dynamic, information-rich economy. For example:

- The Commonwealth of Kentucky refreshed its K-12 system infrastructure by funding Ethernet routing switches, firewalls and content filters for its 174 school districts, thereby providing all of its students with equal access to online courses, testing and communications (Tech Think, 2008).
- England will spend \$200 billion dollars over the next 15 years to transform all of its high schools, and half of its elementary schools, into state-of-the-art technology schools. It is the belief of the British government that if technology is treated as a fundamental building block in school design, education has a major opportunity to transform learning for all learners (Tech Think, 2008).
- Peru is in the process of delivering 486,500 XO laptop computers to every elementary student in its 9,000 remote schools. XO is a \$180 computer that uses wireless Internet access (Tech Think, 2008).
- Australia's Victoria Province connected its 1,630 schools to a wireless network, which is now the largest of its type in the Southern Hemisphere. Each classroom connects to its own curriculum site on the school Intranet (Tech Think, 2008).

The Data Recognition Center was chosen by the General Assembly to survey schools about their current infrastructure. Among the Center’s findings was that there is insufficient infrastructure, too few instructional computers and inadequate numbers of technology support staff to allow for effective technology-based instruction and computer based assessment in South Carolina’s classrooms (DRC, 2007).

According to the Partnership for 21st Century Skills, “business and industry leaders discuss the need for the workforce to possess 21st century skills and the American public agrees. In a survey of registered voters conducted in September 2007, 70% defined computer and technology skills as basic skills.” Those polled ranked these abilities almost as important as reading comprehension to competing in today’s economy” (Partnership for 21<sup>st</sup> Century Skills, 2007).



In 2009, traditional methods of education are rapidly becoming obsolete as South Carolina students demand

more interactive, hands-on learning. South Carolina has seen tremendous economic, political and cultural changes over the past decade with technology serving as the major catalyst in society’s high-tech transformation. By working together, the citizens of South Carolina can ensure technology resources and infrastructure are available to our students in order to prepare them to be competitive in the 21<sup>st</sup> century world.

## REFERENCES

- Data Recognition Corporation (2007). *Study on the Feasibility and Cost of Converting the State Assessment Program to a Computer -Based or Computer -Adaptive Format*. Available at the following URL:  
<http://www.sceoc.com/NR/rdonlyres/005CF7BA-A43F-421B-AB04-72B8B8B6E4A3/5535/SCFeasibilityFinalReport.pdf>
- Lemke, Cheryl and Edward C. Coughlin (1998). *Technology in American Schools: Seven Dimensions for Gauging Progress – A policy*. Santa Monica, Ca.: Milken Exchange on Education Technology. Available at the following URL:  
<http://www.mff.org/publications/publications.taf?page=158>
- Partnership for 21<sup>st</sup> Century Skills (2007). *U.S. Students Need 21<sup>st</sup> Century Skills to Compete in a Global Economy*. Available at the following URL:  
[http://www.21stcenturyskills.org/index.php?option=com\\_content&task=view](http://www.21stcenturyskills.org/index.php?option=com_content&task=view)
- Technology Counts 2005, The Information Edge – Using Data to Accelerate Achievement (2005). *Education Week*. 24(35), 8-26.
- Technology Counts 2006, The Information Edge – Using Data to Accelerate Achievement (2006). *Education Week*. 25(35), 8-26.
- Technology Counts 2008, The Push to Improve STEM Education (2008). *Education Week*. Available at the following URL:  
<http://www.edweek.org/ew/articles/2008/03/27/30intro.h27.html>
- Tech Think Work Group (2008). *K-12 Digital Systems: More Than a Screen and a Keyboard*. Produced by a committee convened by the Education Oversight Committee of South Carolina.
- The South Carolina State Technology Plan (2003-2008). Available at the following URL: [http://www.myschools.com/offices/tech/techplan/sctp2003\\_08/](http://www.myschools.com/offices/tech/techplan/sctp2003_08/)

## APPENDIX A

### K–12 School Technology Initiative Milestones

<p><b>1996</b></p>	<ul style="list-style-type: none"> <li>• The S.C. General Assembly created the K–12 Schools Technology Initiative.</li> <li>• The K–12 School Technology Initiative began funding two-way video projects across South Carolina.</li> </ul>
<p><b>1997</b></p>	<ul style="list-style-type: none"> <li>• The K–12 School Technology Initiative distributed over \$12 million to state districts for local technology implementation.</li> <li>• ETV began digitizing its video resources for use in schools.</li> <li>• South Carolina was recognized by Educational Testing Service as one of five states to provide telecommunications access in all schools.</li> </ul>
<p><b>1998</b></p>	<ul style="list-style-type: none"> <li>• South Carolina received over \$26 million in E-Rate funding.</li> <li>• South Carolina strongly encouraged districts to adopt the International Society for Technology in Education’s National Educational Technology Standards for Students (ISTE NETS-S) and National Educational Technology Standards for Teachers (ISTE NETS-T).</li> <li>• By 1998, South Carolina invested more than \$84 million in hardware, software and professional development opportunities for schools and districts.</li> <li>• The K-12 School Technology Initiative began distributing funding for professional development in technology as well as technology implementation to districts, sending over \$16 million in total funding to districts statewide.</li> <li>• 86% of South Carolina’s schools had satellite dishes to receive education programming, compared to a national average of 29%.</li> <li>• 67% of South Carolina classrooms were connected to local-area computer networks (LANs), compared to 53% nationwide.</li> <li>• <i>Technology Counts '98</i> reported that South Carolina was one of only five states in the nation to provide Internet access to 100% of its schools.</li> </ul>
<p><b>1999</b></p>	<ul style="list-style-type: none"> <li>• South Carolina, an E-Rate leader, received over \$42 million in funding.</li> <li>• DISCUS became available throughout the state via the Internet.</li> <li>• The new electronic student-information collection system, SASIxp, was provided free to all school districts.</li> </ul>

	<ul style="list-style-type: none"> <li>• 100% of all K–12 schools have digital satellite reception.</li> </ul>
<b>2000</b>	<ul style="list-style-type: none"> <li>• South Carolina E-Rate funding continued to climb to over \$52 million.</li> <li>• State K–12 appropriations for educational technology funding increased to over \$40 million.</li> <li>• KPMG Consulting conducted an independent study of technology in education. Their findings concluded that the average student-to-computer ratio in South Carolina was 5:1, 90% of South Carolina public school faculty and staff communicated with students’ homes via electronic methods such as e-mail and Web sites, and 50% of South Carolina’s teachers, 37% of the schools’ technical staff and 21% of administrative staff had received some type of technology training.</li> </ul>
<b>2001</b>	<ul style="list-style-type: none"> <li>• The S.C. General Assembly passed the Teacher Technology Proficiency Proviso, requiring districts to verify that teachers demonstrate technology proficiency during each recertification cycle.</li> <li>• South Carolina received \$44,280,175 in E-Rate funding.</li> <li>• The K-12 Partnership provided \$400,000 of funding, for technical training for districts technology support personnel.</li> <li>• ETV’s Knowitall.org Web portal was officially launched.</li> <li>• South Carolina’s Distance Education Learning Centers (DIGITAL EDUCATION SERVICESs) were operational in all school districts.</li> <li>• The K-12 Partnership provided over \$18 million in flow-through funding to districts for local technology and training.</li> <li>• The Education Oversight Committee issued its long-range planning document (EOC 2001), which cites technology use as necessary for South Carolina to reach its 2010 goal of being ranked in the top half of states nationwide with regard to student achievement.</li> </ul>
<b>2002</b>	<ul style="list-style-type: none"> <li>• K–12 School Technology Initiative funding decreased from a high of \$40 million in 2001 to a five-year low of \$19 million.</li> <li>• South Carolina strongly encouraged its school districts to adopt the International Society for Technology in Education’s (ISTE) National Educational Technology Standards for Administrators (NETS-A).</li> </ul>
<b>2003</b>	<ul style="list-style-type: none"> <li>• All districts were fully implemented and running SASlxp.</li> </ul>

	<ul style="list-style-type: none"> <li>• The Division of State Information Technology (State IT) filed the calculations for all schools and districts for the E-Rate Discount Program. This resulted in over \$49 million for the state and school districts in discount payments.</li> <li>• K–12 School Technology Initiative funding provided Intel Teach to the Future classes to educators across the state.</li> <li>• The new state technology plan, 2003-08 – Realizing the Dream, was presented to all South Carolina stakeholders.</li> <li>• K–12 School Technology Initiative funding supported 30 Technology Coaches.</li> <li>• The SCDE Office of Technology released the new SASIxp Template and the Data Collections Manual, initiated quarterly collections and began to rely on the new South Carolina Educational Data System (SCEDS) which integrates data from PACT, PCS, SASI and Teacher Certification for offices in the agency, thereby reducing demands on school districts.</li> <li>• South Carolina Online Professional Development (SCOPD), now known as eLearningSC, was launched.</li> <li>• A new Training Teachers in Technology (T3) professional development CD ROM entitled “The Nature and Needs of Gifted and Talented Students” was offered to districts.</li> </ul>
<b>2004</b>	<ul style="list-style-type: none"> <li>• The ePortfolio project pilot was launched to assess teacher technology proficiency and to provide information on professional development offerings.</li> <li>• ETV’s Internet video-on-demand, StreamlineSC, was officially launched.</li> </ul>
<b>2005</b>	<ul style="list-style-type: none"> <li>• The legislature called for a feasibility study to investigate computer-based assessment in South Carolina.</li> <li>• StreamlineSC reached 100% of K–12 schools and had 1.3 million views within its first full year of operation.</li> </ul>
<b>2006</b>	<ul style="list-style-type: none"> <li>• The South Carolina Virtual School pilot was launched.</li> <li>• ETV’s Knowitall.org celebrated its 10 millionth hit.</li> <li>• Knowitall launched two new Web sites, including Knowitall Healthy! to address student and community health issues, and Road Trip! Through South Carolina Civil Rights History for middle school students.</li> </ul>

<b>2007</b>	<ul style="list-style-type: none"> <li>• DISCUS launched its new Web site featuring Web 2.0 technology.</li> <li>• The South Carolina State Library began implementation of SchoolRooms, an online multimedia discovery place for the K-12 community.</li> </ul>
<b>2008</b>	<ul style="list-style-type: none"> <li>• ETV launched OnePlaceSC, its newest K-12 education Web portal. The portal allows teachers to search all ETV – and partner's – Internet resources with one user name and password while also offering the ability to view live streaming video through a TV guide.</li> <li>• ETV launched Digital Education Services (DES), an upgraded service of the Distance Learning Education Centers (DLEC), designed to transition existing analog and digital broadcasts to live and video streaming on-demand systems within the local district computer networks.</li> </ul>

## APPENDIX B

### Testimonial: Teacher Technology Proficiency System

Author: Joe Woodbury, Technology Coach, Florence School District Three

**NOTE: K-12 School Technology Initiative funds enabled the creation, and supports the continuing implementation, of the Teacher Technology Proficiency System.**

The teachers in Florence County School District Three are currently using the S.C. Technology Proficiency System in compliance with Proviso 1.25. The State of South Carolina has come a long way from the pen and paper computer proficiency check list through the many phases of an online Web-based technology proficiency system.

As a technology coach of eight years who has used several proficiency systems, and who has gone through the development stages of this system, I look forward to sharing this technology proficiency system to newly hired teachers as a tool to help them, our District and our students.



Florence District Three feels the Administrator (District Staff, Principals, & Technology Coaches) Responsibilities section provides a tool which enables a clear expectation and sets a standard of state-wide technology proficiency levels. The district is committed to supporting all educators in learning the technology tasks that the state and the Information Society for Technology in Education (ISTE) technology standards expect of every teacher in the 21<sup>st</sup> century classroom for the optimal achievement of all students.

This system includes a teacher's self-assessment, which establishes each individual's beginning level to determine technology mastery level. Florence District Three has successfully utilized the self-assessment to develop a series of professional development opportunities. Each educator uses their Individual Technology Growth Plan to gain skills in developing a class Web page, digital photography, Promethean interactive white boards, atomic learning, streamline videos, Video On Demands (VOD), etc. to ensure that teachers reach Level III Technology Proficiency in time for their re-certification period. Once established, these portfolios can be transitioned from district to district as a teacher may choose to move from school to school within the State of South Carolina.

The district educators and leadership continue to feel the Teacher Proficiency requirements are critical and reasonable, especially with the assistance of a technology coach. Most of this system is not additional work for the teachers in Florence School District Three. Because this technology proficiency system exists, our teachers and technology coaches use this instrument to track our

teachers' progress toward ISTE proficiency levels, and to acknowledge those who are already at the ISTE proficiency levels.

As for the e-portfolio, teachers do not necessarily have to create technology samples for their portfolio, they simply provide the evidence of technologies that they currently use in their classrooms by uploading current lesson plans, which include items such as PowerPoint



presentations, word processed technology-rich lesson plans, assignments which require word processed tasks, Web quests, Promethean Board flip charts, classroom Web sites and Excel spread sheets.

Florence District Three is genuinely proud of the groups of students and teachers it takes annually to a residential "Computer Camp" at Camp Bob Cooper for a technology experience provided by Clemson University. Technology coaches provide weekly technology staff development to

targeted schools as well as monthly technology staff development opportunities district-wide. At the camp, the teachers have learned to utilize laptops in a classroom setting while the students receive instruction in basic Microsoft Office programs such as Word, PowerPoint, Excel, Paint and Publisher. This learning is made applicable in a natural field experience and transitioned back into a classroom lab setting. As a technology coach, the pride of being able to showcase the skills acquired by our district's teachers, leaders and students back in our home and school community following the camp experience is always great.

The development of a "Computer Boot Camp for Educators" course as a means for meeting the course requirements greatly assisted a specific bank of teachers in Florence District Three, generating a lot of "ah-ha's" for our educators. The "INTEL" course for teachers also has benefited our more experienced technology users and many of our teachers are enrolling in the S.C. Online Professional Development courses, which are supported by K-12 School Technology Initiative funding. As the district's lead technology coach, I have thoroughly enjoyed teaching both of these courses, and our classes visit the technology e-proficiency Web site often.

Many of our school staff have commented to me that this technology proficiency system is low stress and made for high achievement. They like the built-in support features that allow teachers optimal control over their own proficiency as they upload the documentation of a technology course, documentation of technology professional development, document artifacts to their portfolio and receive feedback from peers and administrators. This system gives teachers real credits and recognition for the technology-rich lessons they are providing for our students. The highest praise I have heard, of course, is that this system has "erased my fear of technology!"

The South Carolina Proficiency System additionally has provided our district with the needed data to continually analyze the technology needs associated with, and contributing to, greater academic achievement for our students. At a glance, district and school-level administrators can determine their teachers' technology proficiency levels to plan professional development activities as well as to assign tasks requiring 21<sup>st</sup> century technology skills.



The educators of Florence County School District Three have respect for the South Carolina Proficiency System. As their technology coach, I have seen the results of the progress in technology proficiency for the teachers and leaders of this district, which has a direct impact on the achievement of our students. Our teachers are serving as role models for their students in the use of integrated technology with 75% of these teachers at a Level 3 or higher. System wide educators – teachers, building leaders, district supervisors and even classified staff and members of our community – are excited about technology because of what is happening in our classrooms. High quality teachers are demonstrating their competencies in technology, and students are using their skills to gain access to the world and opportunities never before had in this small rural district.

47

Florence District Three feels the South Carolina Proficiency System has been a successful venture for our district and proved beneficial for our children, staff and community. The implementation of Proviso 1.25 has been exciting for me as a technology coach. We have already set new goals for our district in 2008-2009 and I am gearing up for our New Employees Program with a greater emphasis on technology. There's always something to showcase here – and you are welcome anytime!

## APPENDIX C – WHAT OTHERS ARE SAYING

### DISCUS

“DISCUS is the best gift the state can give to our learning community. We love it and we use it all the time.”

*Karen Roach, Brockman Elementary School, Richland 1*

“DISCUS is the number one research tool at my school. Teachers are requiring students to use it and have created a better atmosphere for students. The students find what they need without the frustration of Internet searching.”

*Vicki Smith, Pendleton High School, Anderson 4*

“DISCUS has up-to-date materials for every curriculum area. These materials are formatted for multimedia, virtual and interactive purposes. My patrons can always find authoritative information quickly and be able to ‘cite’ the source for their instructors. You have added some fantastic databases this year that are ‘blowing’ my students’ minds. They always try DISCUS first or go back to DISCUS when they can’t find something easily on the Internet.”

*Cathy Hilton, Clinton High School, Laurens 56*

48

“DISCUS has allowed my students to have access to a world of resources that I am unable to afford on my own. DISCUS connects my students to reliable resources in a safe online environment! The new look is very kid-friendly and allows students to navigate on their own!”

*Debbie Jackson, Gilbert Elementary School, Lexington 1*

“‘Go to DISCUS first’ is my kids’ motto (3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> graders).”

*Elizabeth Gregory, John P. Thomas Elementary School, Richland 1*

“My middle school students know to automatically go to DISCUS for any Internet resources. ‘DO NOT Google!’ It has eliminated worries of getting into inappropriate sites.”

*Sandy Bailey, Northwest Middle School, Greenville*

“My students love DISCUS! It makes research so much easier and quicker!”

*Shari Caskey, Edwards Elementary School, Chesterfield*

“I teach DISCUS. Recently, one of my 3<sup>rd</sup> graders taught his middle school brother. Per their mom, now they both use it.”

*Mary Aldridge, Sue Cleveland Elementary School, Greenville*

"We love *Amazing Animals of the World!* I have teachers that never were interested – just promoting it for student research. It is such a captivating presentation of information."

*Susan Cathey, Midway Elementary School, Lexington 1*

"Seneca High School has been using *What Do I Read Next?* – It is a great resource for suggesting new books to students!"

*Jennifer Bredemeier, Oconee*

"I love the PowerPoint. It is a wonderful way to introduce DISCUS to my 4<sup>th</sup> and 5<sup>th</sup> graders. I can pull a slide for refresher and then students have fun exploring the databases!"

*Cathleen C. Moore, Myrtle Beach Intermediate School, Horry*

"(DISCUS) gets relevant information quickly and efficiently. Great homework help tool. I give students bookmarks to take home with usernames and passwords."

*Jan Faile, Lake Carolina Elementary School, Richland 2*

"DISCUS is wonderful. I direct my students to it daily."

*Renee Williams, School District Five of Lexington and Richland Counties*

49

"I love Kids InfoBits. We use it for copyright-free pictures. And I love the citations!"

*Stephanie Nichols, Oakview Elementary School, Greenville*

"We give a demo at the beginning of the year with 6<sup>th</sup> graders and again in all grades as assignments come up. It's great!"

*Mary Cockrell, James Island Middle School, Charleston*

"We love the *Biography Resource Center.*"

*Jessica Felker, Nursery Road Elementary School, Lexington 5*

"Love the new resources, especially *Opposing Viewpoints* and *History Resource Center.*"

*Mary Lou Elliott, Lancaster High School, Lancaster*

"It has helped so much with our research on South Carolina. We love it at our school. Our students enjoy doing research using DISCUS."

*Mary Masse, East North Street Academy, Greenville*

“Students use DISCUS in my media center for research. Teachers have called me at home to access DISCUS for classroom assignments.”

*Sylvia Witherspoon, Scott’s Branch Middle School, Clarendon 1*

“I promote DISCUS by highlighting appropriate databases individually during 3<sup>rd</sup> - 5<sup>th</sup> grade scheduled LMC times. For example, recently I demonstrated the features of NBK and gave students bookmarks with instructions for access at home via DISCUS.”

*Peggy Harrison, Springfield Elementary School, Greenwood 50*

“Love the recent science databases. Thank you for your continued support. I have put your pens to use to students who answer questions during my PowerPoints on DISCUS.”

*Nancy Nelson, Carolina Forest High School, Horry*

“Students are excited to go to one location to go and do research.”

*Lillian Frazier, Scott’s Branch High School, Clarendon 1*

“I love DISCUS and use it a great deal with my teachers. I use Interlibrary Loan with State Library and love that resource – incorporate into lesson plans.”

*Jackie Rapp, Ninety Six High School, Greenwood 52*

50

## **eLearningSC**

“I thoroughly enjoyed both classes. I found them informative; the work requirements were completely manageable in the given time frame, and incredibly convenient taking them online. My experience was very pleasurable and I plan to take more classes in the future, as well as, recommend them to other teachers.”

*Anonymous eLearningSC student*

“I just wanted you to know how much I am learning in this class. To be honest, I thought we would learn the basics and that it wouldn’t really change much about the way I have done PowerPoint. I can’t believe how many things that I have learned. Thanks for all the great information.”

*Anonymous eLearningSC student*

“Thank you! Honestly I have learned more in this class than most I have taken!”

*Anonymous eLearningSC student*

"I just wanted to let you know that I really enjoyed this class. I was very nervous about taking any course right now with my current work load and having a family. I was especially nervous about taking my first on-line course. This course was great. There was a steady pace that did not over-load the students and the instructor was very good. I will definitely take another course."

*Anonymous eLearningSC student*

## **ETV Teacher Technology Workshops**

"Excellent – keep up the good work. I will use many ideas to help prepare future teachers to use technology in the classroom in S.C."

*Dr. Sandra McLendon, Southern Wesleyan University*

"I truly enjoyed every session and will return to future workshops. I have new tools to incorporate into my lesson plans."

*Teacher from Carvers Bay High School, Georgetown*

"Wonderful sessions for the novice and 'emerging expert.' This was a great opportunity for learning and sharing."

*Meredith Spradley, Instructional Specialist, Rock Hill*

"These are the best workshops I have ever attended during my career, not only this year, but last year's also – very, very professional. ETV's personnel are so welcoming also. Wonderful!"

*Miquel A. Fleitas, Scott's Branch High School, Clarendon 1*

"I learned more in my ETV workshops than I learn at conferences where I have paid to attend."

*Laura Linder, District Office, Berkeley*

"Everything was wonderful. I can't wait to go back to school and use these new programs. It was a day well spent."

*Mary O'Leary, St. Andrews Elementary School, Charleston*

"It was hard to choose sessions since so many wonderful options are available. A great day; super presentations; time well spent!"

*Linda Maguire, Lexington Middle School, Lexington 1*

"Thanks for offering hands-on workshops. I am excited to go back to school and apply new knowledge."

*Beverly Sparkman, Hanahan High School, Berkeley*

“I so appreciate the quality of the workshops, facility, food, friendliness and helpfulness of everyone. We have been made to feel very special at ETV.”

*Rebecca Elswick, Mid-Carolina High School, Newberry*

“ETV provides a great service for free! I was not aware of Voicethread technology until this workshop. I can’t wait to share Voicethread and Movie Maker with teachers and students.”

*Rebecca Elswick, Mid-Carolina High School, Newberry*

“This was a very useful workshop. Each session offered great ideas and awakened me to lots of different ways of integrating technology into instruction that I did not know about before.”

*Mildred Harris, Hall Institute, Richland 1*

## **KnowItAll. Org**

“KnowItAll.org is a true treasure. I doubt if any other state in the nation has such a well developed, fun, visually pleasing and easily navigable Web site created just for students! I love every facet of Knowitall.org and marvel at the creative minds behind it.”

*Randa Edmunds, Media Specialist, Sumter*

52

“I knew some of the possibilities using KnowItAll.org... but I had no idea just how expansive and user friendly this site was. I can think of many ways which I will be able to incorporate using this Web site in my lessons and lesson extension activities. The possibilities are endless.”

*Angela McGuire, Manning Primary – Clarendon 2*

## **StreamlineSC**

“Thank you so much for the unitedstreaming (StreamlineSC) videos. It is the most wonderful resource to all of our teachers... (It is) the most valuable and used resource I have ever had the opportunity to use. Thank you!”

*Marilyn Jenkins, Hillcrest Middle School, Sumter 2*

“I use unitedstreaming (StreamlineSC) in my classroom as an aid with instruction. Students seem to recall more information when they have seen a clip from unitedstreaming. Please keep this service available for teachers. It is a VALUABLE resource. Thanks!”

*Andrea Alerre, Wren Middle School, Anderson 1*

“We just want to say how much we appreciate StreamlineSC. Thank you very much for providing such a useful educational tool.”

*Jean Gibson, Mid-Carolina Middle School, Newberry*

“Thanks for a wonderful resource filled with information that can be used daily.”

*Bess Strong, Brunson Elementary School, Hampton 1*

“I have heard rave reviews from teachers – they love it – and now that we have moved to MetroEthernet in all but one school – and have a server in place – they love it.”

*Paula Yohe, Director of Technology, Dillon 2*

We really enjoy StreamlineSC... especially with all the SMART Boards we have now... thanks SCDE (and ETV) and please, please... keep Streamline SC.”

*Deborah Fore, Coordinator of Computer Services, Fort Mill*

“Thank you so much for coming to Ebenezer Middle to share such great information. The LCD projectors have been checked out and used every day since you left. I forwarded the information to the teachers about the various workshops. You and ETV are doing a wonderful job for all of us! Keep up the good work and keep in touch with upcoming events. Again, thanks so much.”

*Nancy Mims, Ebenezer Middle School, Sumter 2*

“I am currently enjoying the staff development materials on StreamlineSC – especially the ASCD videos and anything produced in S.C. I do hope you will be able to get the contract extended. StreamlineSC is a much-needed resource in our schools.”

*Doris Parker, Regional Technology Specialist, South Carolina Department of Education*

“I cannot express to you in enough words how much the students and I enjoy having the capability of using unitedstreaming (StreamlineSC) to enhance our unit of study. It has an endless number of uses and adds just the right touch! Thank you so much for all of your help in making all of this possible! I hope we will be able for many years to count on this free valuable resource! Thanks again!”

*Ginny LeGrand, Gordon Early Childhood Center, Fairfield*

“Your program set a wildfire into the teachers and I thank you so much. It has been wonderful seeing their response and eagerness to begin incorporating the Streamline resources. Thank you again for taking the time and illustrating to the Hammond community the tremendous resources available to them.”

*Maria Swygert, Lower School Technology Teacher, Hammond School*

“The teachers are still talking about the presentation. Not only are they talking about it, I was in the second grade teacher's room and see evidence of how she is applying what you shared. I met with the first grade teachers today and the two first grade teachers that were at your presentation have already made the rest of them hungry to know more. The two teachers have vowed to show the rest. It is great to see what you shared being sustained within the building!”

*Cat Hamilton, Redcliffe Elementary School. Aiken*

“Thank you so much for coming to speak to the multimedia course at Lexington Elementary! They were so excited about all the possibilities that ETV’s StreamlineSC has to offer. I have heard so many compliments and ideas about new ways to use it from beginners and people who considered themselves Streamline veterans. We learned so much! Have a great week!”

*Suzanne Brooks, Lexington 1*