

South Carolina
K-12 School Technology Initiative

2012-13 Progress Report



Table of Contents

Executive Summary.....	3
Learners & Their Environment.....	6
Community Connections.....	15
Professional Capacity.....	18
Instructional Capacity.....	22
Support Capacity.....	24
Conclusion.....	29
Appendix A – Initiative Budget.....	30
Appendix B – By The Numbers.....	31
Appendix C – Milestones.....	35
Appendix D – What Others Are Saying.....	41

Executive Summary

The South Carolina K-12 School Technology Initiative continues to make great strides in providing a robust, flexible and economical network and Internet infrastructure to public schools, district offices and libraries across the state. Through a dynamic partnership with the state's telecommunications providers, balancing state appropriations and Federal E-rate funds and leveraging economies of scale that derive from statewide purchasing, the state's K-12 educational partners have been able to meet the most demanding bandwidth requirements and enable exciting, new instructional efforts in each of the state's school districts.

The effort to ensure sufficient Internet bandwidth to connect schools and libraries to the world of information and powerful learning tools is critical. It is equally imperative to upgrade network connectivity and instructional computing infrastructure inside school and district

walls. The explosive growth of "one-to-one" instructional initiatives (one computer/tablet per student) and the proliferation of virtual

courses are driving these critical needs. The growth of powerful, but bandwidth-hungry, learning and administrative applications running inside schools' and districts' local and wide-area networks is placing the greatest strain on K-12 network and computing infrastructure today.

Under the K-12 School Technology Initiative's

revised Internet bandwidth policy baseline, virtually every school and district office in the state has received, or is in the process of receiving, adequate Internet connectivity to meet current instructional and administrative needs. This baseline provides substantially more Internet bandwidth per student, in recognition of the radically increased use of Web-based learning resources.

While the availability of increased connectivity has proved beneficial in helping to meet instructional needs, the current state of the technological infrastructure found inside the walls of many of our school buildings and district offices may offset or reduce any advances gained through the additional bandwidth. Often the culprit is aging network switches and routers or older cabling not up to the task of handling the sheer volume of data that must move daily on a K-12 school network. As many schools transition

"The current state of technological infrastructure found inside many of our schools may offset or reduce any advantages gained through the availability of additional bandwidth."

to "one-to-one" student computing, older network layouts with only one or two network connections per classroom are clearly insufficient. Many of the computing devices placed into students' hands today cannot be connected to a wired network infrastructure, but demand high-speed wireless networking capability across the entire school campus or library facility. Online student testing

and powerful student records database applications are necessary to track academic outcomes and ensure state and federal compliance.

Such requirements place further burdens on aging public school and library IT infrastructures. If schools were retrofitted at the cost of the average type of school, the total amount needed would equal \$97.2 million. The state must continue to fund the \$10.2 million (see Appendix A – Initiative Budget) for bandwidth expansion but at least double the EIA appropriation in Fiscal Year 2014-15 to begin increasing the Wi-Fi capabilities of schools. These additional funds would be allocated based on the district's poverty index (the percentage of students eligible for the index of the free or reduced price federal lunch program and/or Medicaid). If additional funds, including non-recurring funds are available, then the state could begin addressing the \$97.2 million technology need.

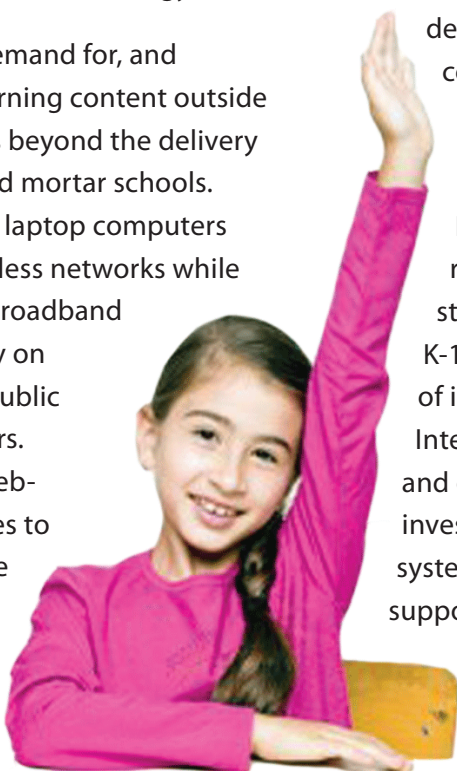
The increased student demand for, and reliance upon, digital learning content outside of the classroom extends beyond the delivery of bandwidth to brick and mortar schools. Students with tablet and laptop computers over-tax insufficient wireless networks while those without in-home broadband Internet service must rely on an aging population of public access desktop computers. Today's highly mobile, web-enabled student struggles to access all of the reference material they need after school if they do not own or have not been issued their

own mobile computing device. The state's public libraries generally lack the resources to provide enough access points to the Internet bandwidth they currently have available.

More than ever before, the footprint of modern, digitally-driven K-12 education has spilled beyond traditional school classrooms. Today's learner is a digital native of a world in which constant, ubiquitous connectivity is the norm; the learning process and the technologies that support it must therefore be highly mobile and widely available in public schools and libraries. Public schools – including the state's special schools, the state's public library systems, the SC Department of Education, the SC Education Oversight Committee, the SC Budget and Control Board's Division of State Information Technology, the state's private telecommunications service providers and learning content providers like SC Education Television and the SC State

Library – are all critical partners in developing and sustaining the connected learning environment upon which our K-12 students rely.

Therefore, the South Carolina K-12 School Technology Initiative recognizes the great strides the state has made in connecting its K-12 schools and libraries to a world of instructional resources via the Internet. However, there is an urgent and growing need to aggressively invest in public school and library system infrastructure required to support a learning environment that prepares students to succeed in the 21st Century jobs marketplace.



About the Initiative:

The South Carolina K-12 School Technology Initiative was founded in 1996, as part of the General Assembly's proactive approach to addressing technology infrastructure, connectivity and education in schools throughout the Palmetto State.

The Initiative – steered by a unique public/private partnership that includes the S.C. Budget and Control Board, S.C. Department of Education, S.C. Education Oversight Committee, S.C. Educational Television, S.C. State Library and the private sector represented by AT&T and the S.C. Telecommunications Association – guides the distribution of funds appropriated by the Governor and General Assembly. These funds collectively help to meet our schools' needs for software, hardware, connectivity, digital content, instructional technologies and professional development opportunities.

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.

Contact Us:

S.C. K-12 School Technology Initiative
4430 Broad River Road, Columbia, S.C. 29210

Website: <https://sck12techinit.sc.gov>



P.O. Box 12444
Columbia, SC 29211
www.bcb.sc.gov



**SOUTH CAROLINA
STATE DEPARTMENT
OF EDUCATION**

1429 Senate Street
Columbia, SC 29201
www.ed.sc.gov



**SC EDUCATION
OVERSIGHT COMMITTEE**

1105 Pendleton Street, Blatt Bldg., Room 227
Columbia, SC 29211
www.eoc.sc.gov



1041 George Rogers Blvd.
Columbia, SC 29201
www.sctev.org



**south carolina
STATE LIBRARY**

1500 Senate Street
Columbia, SC 29201
www.statelibrary.sc.gov



1600 Williams Street
Columbia, SC 29201
www.att.com



220 Stoneridge Dr., Ste. 302
Columbia, SC 29210
www.sctleassoc.com

Learners & Their Environment

South Carolina Technology Plan Goal:

Embed digital information systems into research-proven instructional strategies so that our students achieve technological literacy, attain 21st century skills and meet the state's academic standards.

Partnership Efforts to Support the Goal:

The level of advanced educational technology present in today's typical K-12 public school classrooms and public libraries would have been difficult to imagine fifteen years ago. At that time, the most futuristic predictions envisioned perhaps a computer in every classroom, a school computer lab where students could obtain "hands-on" access to a computer for an hour a day, video used as an occasional addition to lecture-based lesson plans and teacher-mediated access to online research resources.

Today's K-12 classrooms and libraries are on the cusp of a revolutionary

change in the dynamics and methodologies of learning. In many schools across South Carolina, students are part of

"one-to-one" computing

initiatives, with each student being issued a laptop computer or tablet. The student's access to IT resources and to online research and instructional content is direct and at-will. Students seek wireless connectivity anywhere and anytime on the school campus and need similar capability in public library spaces as they complete schools assignments in the evenings and on weekends.

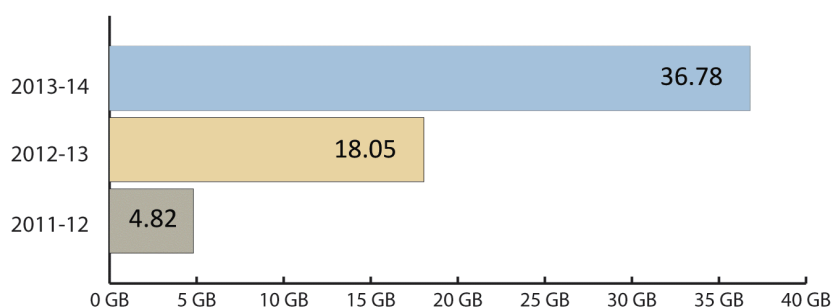
Video, interactive simulation and the use of massive educational databases are no longer infrequent embellishments of classroom lectures, but more and more provide the core of today's learning experience. Collaborative research, analysis and reporting are now the norm in the K-12 classroom.

Enrollment in South Carolina's virtual public schools continues to rise. Students enrolled in brick and mortar schools are now allowed to take more virtual school courses than ever before. Paper textbooks, with their high cost of procurement, warehousing, distribution and updating, are giving way to the use of e-textbooks in ever-increasing numbers. E-textbooks, purchased from respected publishers, are downloaded to student laptops or tablets, augmented with video and simulations, and prove to be much simpler to manage and update as needed.

"Increasing bandwidth, while critical, must be matched with proportional increases inside our schools and libraries, from the demarcation point to the wirelessly connected student or teacher."

Hand-in-hand with the revolution in digitally-driven pedagogy, state and federal accountability requirements demand more detailed and rapid student record-keeping, analysis and reporting. The South Carolina Department of Education is deploying an enterprise suite of administrative applications (SmartSchools) that leverage huge pools of data regarding students' learning outcomes,

Growth of Bandwidth Demand in School Districts



the success of teachers and schools in attaining academic goals and many factors related to the efficient operation of public schools. Student testing, which used to be paper-based and locally managed, is now performed nearly entirely online. This guarantees the immediacy and accuracy of student academic data and leads to teachers being able to customize learning strategies on a needs-based, student-by-student basis.

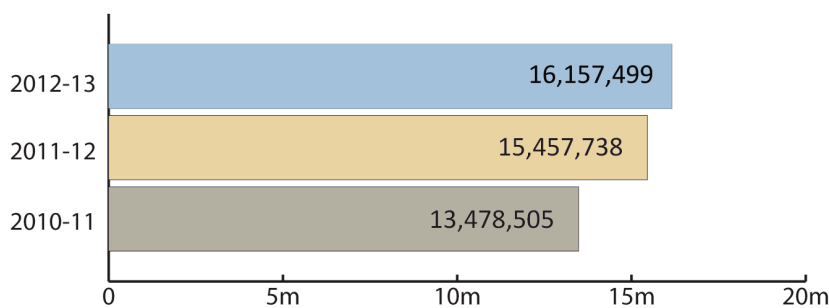
Clearly, the instructional IT infrastructure needed to support today's learning environment in our public schools and libraries is radically different and much more highly articulated than educational IT systems of even a decade ago. Many computing devices assigned to students can only connect to the school or library network by means of a wireless (Wi-Fi) connection. Due to the exponential rise in the number of devices used by students, teachers and public library patrons, it is now indispensable that every public K-12 classroom and library have sufficient wireless access points to meet these elevated connectivity needs. Moreover, students working with mobile devices need wireless access in lunchrooms, libraries,

auditoria, indoor and outdoor gathering areas, gymnasias and other locations beyond the walls of the traditional classroom.

The greatly increased need for multiple wireless access points, in turn, requires complementary network updates from the wireless access points back through the network switches and routers all the way to the demarcation point (D-Marc), or the point at which internal IT systems physically connect to Internet infrastructure provided by the state's telecommunications companies. Increasing Internet bandwidth to public schools and libraries, while critical, must be matched with proportional increases in bandwidth and connectivity inside schools and libraries from the D-Marc all the way to the wirelessly connected student or teacher.

This, then, is the great challenge facing the state's K-12 Technology Partners. Bandwidth linking public schools and libraries among themselves and to the Internet must be constantly maintained and upgraded as data flow dictates. But the end-to-end educational IT infrastructure can only meet the learning needs of today's students and can only support the educational outcomes expected

Discus Usage (Items Retrieved)



by the state if it is upgraded in ways that bring the full power of digitally-driven learning to each student's laptop computer or tablet.

The K-12 School Technology Initiative's partners have made tremendous strides in their efforts to help achieve these goals through a variety of successful programs. Such programs include:

Discus

Digital Information for South Carolina Users (Discus), South Carolina's virtual library, is an invaluable resource supported by the K-12 School Technology Initiative. Administered by the South Carolina State Library (State Library), Discus uses K-12 School Technology Initiative funds to help provide an electronic library of essential high-quality information and educational resources to all state residents through schools, higher education institutions and public libraries.

Through Discus, South Carolinians have the ability to access thousands of magazines, newspapers, encyclopedias, videos, career practice tests and more on a 24x7 basis. Since its inception 15 years ago, there has

been a continual growth in usage. The chart above illustrates Discus usage over time and demonstrates the program's contribution to the K-12 learning environment. In Fiscal Year 2012-13, South Carolinians retrieved 16,157,499 items, a 4.52 percent increase over the previous year. Historically, the K-12 community has been responsible for a large portion of these retrievals, with approximately 51.6 percent of the overall Discus usage in FY 2012-13 attributed to this group.

In the South Carolina Standards for a School Library Core Resource Collections (2009), Discus was included as an indispensable resource to help school libraries meet standard collection recommendations for all grades – elementary, middle and high school. Without Discus, many resource-constrained schools could not meet these core collection recommendations.

Discus helps level the playing field for students by providing the same high-quality resources regardless of economic status or geographic location. Without access to high-quality, current and age appropriate information, student learning suffers. As such, K-12 media centers, as well as academic and

public libraries, directly benefit from the availability of Discus.

Following an extensive evaluation project conducted during the previous year, FY 2012-13 was a transitional period for Discus during which time institutions and users familiarized themselves with a wide variety of new content and resources. The new collection of resources includes a large package of databases from EBSCO Information Services. Having the EBSCO resources as part of the Discus collection will enable a smoother transition for South Carolina students as they take their research and information-seeking skills from high school to institutions of higher education.

Discus provides an excellent return on investment from both a learning perspective and from a cost efficiency standpoint as indicated through the following information:

- Discus database license costs budgeted for FY 2013-14 were \$2,397,495.
- If each library purchased access

separately, the total cost would be over \$57 million.

- Administration of this statewide program provides cost avoidance of over \$52 million (Discus license renewal costs were over \$2 million).
- All state funding for Discus goes directly to database acquisition.

To learn more about Discus, please visit www.scdiscus.org.

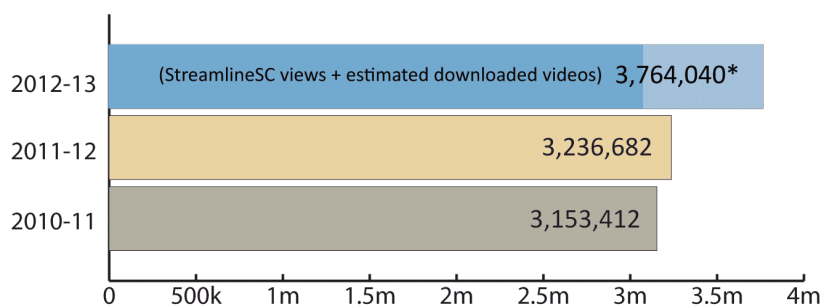
StreamlineSC

South Carolina ETV (SCETV), in partnership with the K-12 School Technology Initiative, the South Carolina Department of Education (SCDE) and school districts, offers StreamlineSC, a collection of over 60,000 video clips accessible by the state's teachers and students. StreamlineSC, a standards-based media-on-demand service that utilizes Discovery Education Streaming, is offered to all public, private and home-school students. SCETV, SCDE, local school districts and Discovery Education provide the programs,



**CLICK TO VIEW THE "BANDWIDTH BOOM" PRESENTATION, OR VISIT
WWW.SCETV.ORG/INDEX.PHP/VIDEO/INDEX/15723**

StreamlineSC Utilization (Items Viewed)



as well as thousands of digital images, songs, sound effects, speeches and pieces of clip art. Schools also have access to an interactive quiz center, pre-produced classroom activities, tests and teachers' guides.

StreamlineSC generated 2.69 million uses of resources in FY 2012-2013, continuing to represent one of the highest per teacher user rates in the nation for a service of this kind. The service is being used in all of the state's public school districts, 362 private and special schools and 275 home schools and associations. There are over 39,000 active registered teachers and support staff using the service which provides 142,117 educational assets, including 27,176 local and state resources.

* The decrease in page views in 2012-13 is attributed to an increase of utilization in downloaded content, which is not tracked in the current reporting measurements. Discovery Education estimates that downloaded videos are used on average 3.5 times per download. This year StreamlineSC had 306,107 downloads of full videos and segments, which equates to an estimated 1,071,595 additional uses.

To learn more about StreamlineSC, please visit www.scetv.org/education/streamlinesc.

PBS LearningMedia

In 2012, SCETV partnered with Public Broadcasting Service (PBS) to provide a comprehensive PBS source of learning objects, including video, audio, images, games and interactive learning activities designed specifically for classroom use. The new service, called SCETV PBS LearningMedia, is a media-on-demand service similar to SCETV's StreamlineSC. This K-12 service features PBS award-winning content that has high value research supporting how students benefit with proper engagement. PBS Kids programs, including mobile applications and interactive games are part of LearningMedia, and several PBS Kids series were specifically developed to teach pre-K to 3rd grade children how to read. PBS Kids provides a comprehensive transmedia platform for early literacy and STEM curriculum.

To learn more about PBS LearningMedia, please visit www.pbslearningmedia.org.

Digital Education Services

SCETV provides and maintains Internet Protocol (IP) based content delivery systems located and managed by South Carolina's K-12 school district's Digital Education Services (DES) personnel. Currently, 72 of the 81 districts are equipped with IP media distribution server and software. These servers assist in the rapid, high-quality delivery of on-demand educational video clips to schools while reducing the bandwidth load placed on the district's Internet connection.

OnePlaceSC

SCETV and its education partners offer a variety of quality K-12 educational content websites. One way to access content is through SCETV's OnePlaceSC, a single K-12 web portal that provides access to all qualified web content through one site. The site features SCETV resources including StreamlineSC and Knowitall.org, as well as partner resources available through the State Library's Discus, Public Broadcasting Service (PBS) and affiliates, SCDE and local districts. Users can easily locate the qualified assets they need from one site. OnePlaceSC

also provides professional development opportunities as well as district and statewide broadcast TV guides for all the education and broadcast programs offered live to the K-12 community. During 2013-14, SCETV will introduce a simplified and improved website, no longer requiring a teacher login.

To learn more about OnePlaceSC, please visit scetv.org/education/oneplacesc/.

Knowitall.org

Another indispensable resource supported through the K-12 School Technology Initiative is SCETV's Knowitall.org. Created for K-12 students, teachers and parents, Knowitall.org is a free online collection of original and engaging educational resources designed specifically for classroom use. This award-winning web portal contains interactive sites, simulations, image collections, virtual field trips and streaming video designed to support and provide quality inquiry-based experiences for South Carolina's students.

During the 2012-2013 reporting period, Knowitall.org educational resources were viewed more than 3.5 million times. Plans are

Knowitall Utilization Comparison

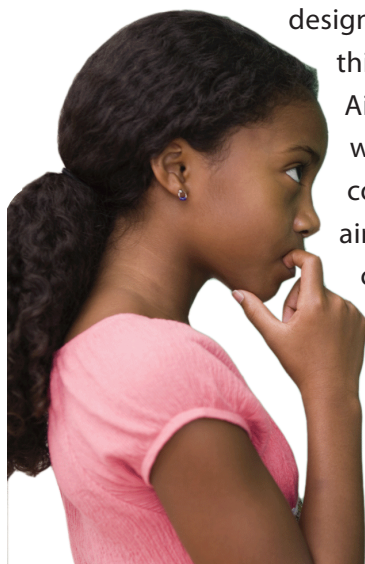
	2010-11	2011-12	2012-13
Visits	717,477	911,837	848,497
Page Views	4,474,721	4,073,747	3,567,657
Unique Visitors	497,080	783,816	621,573



in place to offer a mobile-friendly version of Knowitall.org which will improve accessibility for the rich content. This year, SCETV surveyed several district curriculum leaders and learned that South Carolina social studies, as well as science, technology, engineering and mathematics (STEM) components and music content are in high demand. Knowitall.org websites continue to enjoy great popularity with students, teachers and parents. Knowitall.org contains such sites as:

- Artopia – a virtual arts festival for K-12 students.
- Hobby Shop – where students can learn math and science while experimenting with virtual chemistry sets and model rockets.
- RiverVenture – which allows students to travel virtually down the entire length of one of South Carolina’s primary watersheds, continue to enjoy great popularity with students, teachers and parents.

Workforce development is another area of need identified by school districts. An essential component of Knowitall.org



designed to address this area is Career Aisle. This site, with career counseling videos aimed at assisting counselors and students in focusing learning on marketable career objectives,

continues to be a popular site with over 400,000 page views.

Another important career development resource is the ETV American Graduate website. ETV American Graduate is a Corporation for Public Broadcasting-funded initiative designed to help communities across the country develop solutions to address the dropout crisis by encouraging awareness of the factors that contribute to the crisis, as well as the economic consequences of dropping out of school. ETV American Graduate informs the public about South Carolina’s graduation rate and helps link stakeholders – including educators, parents and students – to local educational resources, community organizations, youth groups and alternative learning options.

Based on the success of the 2012 event, SCETV secured and hosted an American Graduate Youth Media Summit and Civil Rights Forum in the spring of 2013. The project focused on digital and social media as a strategy for student engagement and critical thinking skills and allowed students the opportunity to interview civil rights veterans. The project won a Television Website Merit Award and the Richard M. Uray Public Service Project of the Year Merit Award from the South Carolina Broadcasters’ Association.

To learn more about Knowitall.org, please visit www.knowitall.org/.

StudySC

In 2010, the State Library launched StudySC, a K-12 educational resource that provides online content designed to support South Carolina-specific curriculum standards.

StudySC provides South Carolina-specific web resources for homework and project assistance while also offering teachers lesson plans and other content designed to support classroom activities. Information – including links to high-quality websites and multimedia content – is arranged by grade level and subject area, so students can access the information they need as efficiently as possible.

The concept for StudySC emerged from feedback indicating the need for a comprehensive portal to assist in locating age-appropriate state information. StudySC was created to meet this need and to support 3rd and 8th grade social studies curriculum standards. Subjects include culture, government, environment and geography as well as history. In addition, the site includes a section on famous South Carolinians, a glossary, daily Twitter feed with South Carolina facts, and South Carolina Book Award nominees from the South Carolina Association of School Librarians.

In FY 2012-2013, StudySC had 89,122 visits from across the state, an increase of 66% from last year.

To learn more about StudySC, please visit www.studysc.org.

South Carolina Virtual School Program

The South Carolina Virtual School Program (SCVSP), a program developed in 2007 by the South Carolina Department of Education's (SCDE) Office of Virtual Education, provides an invaluable resource to students throughout the state by offering online courses for credit, free-of-charge to all South Carolina students.

Since its inception, SCVSP has become increasingly popular and has experienced a 64 percent growth in the number of students served. SCVSP courses are available to any South Carolina public, private or home schooled student, and the courses are provided online via an online learning management system, student information system, e-mail, telephone, instant messaging and real-time web conferencing software.

To ensure that course offerings meet SCDE assessment requirements and align to state standards, materials are evaluated by a SCVSP curriculum coordinator. In addition to this requirement, SCVSP evaluates a course if its content is changed to a significant degree such that its alignment may be questionable, or if the standards themselves are changed.

SCVSP courses are taught by state-certified teachers who have shown expertise in their subject areas. All full-time teachers hold a rating of "highly qualified" in their subject area by the SCDE. In addition to their outstanding credentials, all full-time and part-time teachers must undergo in-service Online Professional Development training to teach at SCVSP. SCVSP used 26 full-time teachers for the academic year and added 20 part-time teachers to meet the high demand of student requests for courses. Unfortunately, approximately 450 students who requested courses with SCVSP were unable to be served due to the lack of staff and faculty available to assist and instruct these students. Additional staff and faculty would enable SCVSP to serve all students requesting courses.

In 2012-13, SCVSP was able to serve 16,800 students from 281 schools in 81 public school districts, 16 home school associations,

49 private schools and 33 adult education centers located throughout the state of South Carolina. Out of the students who completed their course, SCVSP had a successful course completion rate of 93 percent for the year.

SCVSP offered courses in nine subject areas, including career and technology, fine arts, world languages, English, health/physical education, mathematics, science, social studies and test preparation. SCVSP offered 72 diverse courses of varying levels, such as Advanced Placement, credit recovery and college preparatory classes.

In addition to courses in the core content areas of English, mathematics, science, and social studies, SCVSP offered three languages – Spanish, Latin, and Mandarin Chinese – and a variety of electives in such popular career majors as health occupations, family and consumer science, and business education.

To learn more about the South Carolina Virtual School Program, please visit scvspconnect.ed.sc.gov.

SCVSP Additional Funding Needs

SCVSP has grown exponentially over the past few years, and at this point, the program is poised to grow in several different ways. Additional funding will allow the program to expand at a faster rate into lower (middle and elementary) grade levels. Instructional materials used to develop new courses are costly, so

expansion into different areas could be done at a faster rate with additional funding.

One of the main goals of the program at this point is to partner with schools across the state in an effort to help bring about educational equity. One way to bring about such equity is by offering courses that may not typically be available to students in smaller and more rural schools, such as varied AP level courses, world language courses, and various electives. In addition, SCVSP would like to partner with under-achieving schools by offering blended learning opportunities as well as the Franchise Program.

While these programs offer a huge cost savings to schools, there are still costs involved with keeping the courses up-to-date, such as instructional materials which would need to be purchased, and licensing fees for the systems that students use will all increase as the number of students taking courses increase. So, for the program to really reach many of the districts and schools in South Carolina with these programs, additional funding will be needed to cover the costs of materials to keep these programs moving forward.



Community Connections

South Carolina Technology Plan Goal:

Use technology, including assistive technology and digital information systems to maximize community involvement and community partnerships and to increase student achievement.

Partnership Efforts to Support the Goal:

It is increasingly recognized that teaching the young persons of our state is an undertaking that cannot succeed unless it spills out of the traditional classroom and into the community. The primary focus of this “community” is, of course, the family of the K-12 learner. Mobile learning enables the learner to engage with content and to collaborate with teachers and fellow learners anytime and anywhere. But the level of engagement and support of learning present in the learner’s home is critical to the success of the academic process. If anything, digitally-driven mobile learning has amplified this truth.

It is not easy for every family to support the learning needs of K-12 learners by providing in-home broadband Internet

connectivity and wireless access for the computing devices issued to those learners by their schools. In addition, many parents and older siblings may be inhibited in their direct support of learning by a fear of not understanding either the learning task or the technology designed to support it.

Public libraries in South Carolina are in the front lines of addressing these issues. The libraries offer connectivity to learners that

they must have to complete after-school assignments, but which may not be available to them at home. The libraries also provide support and learning opportunities to learners’ parents, care-givers and siblings to enable them to increase their confidence in supporting the learning process.

Finally, both increased confidence in functioning in the digital world and access to connectivity can be leveraged by families to pursue better employment, training, advancement, more efficient interaction with social and support agencies and many other resources designed to enrich the family/community environment. These enhancements, in turn, produce a learning support structure and values system that help to ensure the success of the learner in the K-12 classroom, be it brick and mortar or virtual.

“Teaching the young persons of our state is an undertaking that cannot succeed unless it spills out of the traditional classroom and into the community.”

The K-12 School Technology Initiative’s partners have made tremendous strides in their efforts to help achieve these goals through a variety of successful programs. Such programs include:

Discus

The South Carolina State Library’s Digital Information for South Carolina Users (Discus) program is designed to help ensure a level

playing field for all South Carolinians by providing access to high-quality information needed for general research, consumer and health issues, small business development and career exploration.

In 2012-13, Discus continued to provide several career and workforce development products designed to help students begin to determine potential career paths while also assisting many of the citizens of the state in their efforts to return to work. These products include such resources as Ferguson's Career Guidance Center, LearningExpress Library and the EBSCO Career eBook collection.

Ferguson's Career Guidance Center is a career research database that includes overview articles and videos on over 3,000 jobs and 94 industries, broken down into 16 career clusters created by the U.S. Department of Education. Ferguson's also includes searchable entries on scholarships, internships and more.

LearningExpress Library is an interactive tool that provides practice tests and tutorials designed for both students and adult learners to succeed on academic and licensing exams. Feedback includes immediate

scoring, complete answer explanations and individualized analysis of the user's results.

Discus also provides several new resources that appeal to a broad range of South Carolinians, such as the Auto Repair Reference Center, MasterFILE Premier and Small Business Reference Center.

Auto Repair Reference Center provides information on both domestic and imported vehicles and MasterFILE Premier contains a large collection of publications on topics of general interest. Entrepreneurs will find up-to-date information on topics related to starting and managing small businesses in the Small Business Reference Center.

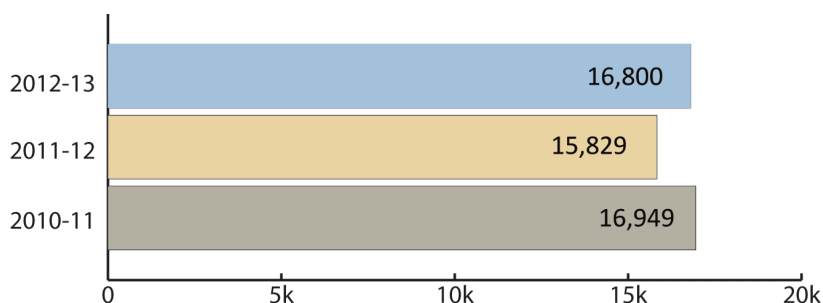
Having these kinds of practical resources available in public libraries, schools and higher education institutions creates connections within the community and helps increase citizen involvement.

To learn more about Discus, please visit www.scdiscus.org.

South Carolina Virtual School Program

In 2013, the South Carolina Virtual School

S.C. Virtual School Program (Students Served)



Program (SCVSP) made great strides in implementing the office vision of becoming completely mobile compatible to allow for truly anytime and anywhere learning. As virtual education has grown in popularity it has become apparent that students learn in a variety of ways and locations. Additionally, not all students across the state have the proper Internet capabilities for online learning, but many students have access to a mobile device that they could use as a learning tool.

In January 2013, the Learning Management System (LMS) used by the program was completely upgraded to make platform natively mobile. After the upgrade, the SCVSP staff has been working to create a course template that is flexible and will work on a variety of mobile devices from smart phones to iPads.

Currently, the SCVSP staff is building the program's first mobile application to connect all applications in use by the program into an application for smart phones that will be available in both the Android Play store and the Apple Marketplace. The application is expected to be completed by February 2014 and available for all parents, students and school counselors statewide to make learning with a mobile device easier. Additionally, the mobile application will make information more easily available to students and parents across the state.

Lastly as the SCVSP begins to implement a new registration

system for students, the process will become mobile ready as well. This final step will make the entire process from registration to course content available on mobile devices for students. These new enhancements will benefit students across South Carolina that may not have Internet or computer technologies in place at home, but have access to a smart phone.

To learn more about the South Carolina Virtual School Program, please visit scvspconnect.ed.sc.gov.



Professional Capacity

South Carolina Technology Plan Goal:

Provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can continue to increase student achievement.

Partnership Efforts to Support the Goal:

The K-12 learning environment – characterized by one-to-one, mobile computing models, increased collaborative inquiry and project-based learning – places unprecedented demands on the training and ongoing professional development of teachers. Although deep subject matter expertise is still required, today's K-12 educators must also master and manage complex and rapidly evolving IT technologies and IT-driven pedagogies. Many new teachers entering the profession today are themselves "digital natives" and are the product of rapidly improving university education degree programs. However, both new teachers and seasoned veterans alike require ongoing skills upgrades and professional development in order to keep pace with the accelerating changes in educational technology.

Adequate funding of professional development programs and content provided by the state's K-12 education partners translates into better prepared teachers and improved student learning outcomes.

The K-12 School Technology Initiative's partners have made tremendous strides in their efforts to help achieve these goals through a variety of successful programs. Such programs include:

PBS Teacherline Southeast

South Carolina ETV (SCETV) is an online course provider of PBS Teacherline, an outstanding resource offering online graduate level professional development courses for teachers throughout South Carolina, Georgia and North Carolina. Through these courses, Teacherline strives to help educators acquire the skills they need to become – and stay – the highly qualified teachers needed to prepare students for a successful future.

"Adequate funding of professional development programs and content translates into better prepared teachers and improved student learning outcomes."

During FY 2012-13, SCETV staff provided teachers with 631 different PBS Teacherline graduate course seats for a total of 22,185 instructional hours. During this time, the SCETV operated Teacherline website generated over 26,000 visits by 19,134 unique visitors for a total of 67,303 page views with 7,412 returning visitors.

To learn more about PBS Teacherline Southeast, please visit www.teacherlinesoutheast.org/.

ePortfolio System and Online Professional Development for Certified Staff

In June 2013, the ePortfolio system that was developed by the SC Department of Education's Office of Virtual Education in an effort to improve technology skills for teachers and students was retired. Over the past few years, district use of the system had steadily declined when the Enhancing Education Through Technology (E2T2) Grant sunsetted and districts no longer had funds available that required the use of this system.

Even though the system was retired, districts interested in using the system were granted an open-source license for the source code at no cost. Using this method, the agency is still providing the code to interested schools and districts, so that they can continue using the system and adapt it to meet their individual needs. Many schools have adopted their own system of tracking staff technology proficiency and have elected to not use the ePortfolio system.

Though the ePortfolio system was retired, the Office of Virtual Education still recognizes the importance of improving teacher technology proficiency to help ensure students are receiving the appropriate instruction to become productive citizens in the 21st century. As a replacement for the ePortfolio system, the Office of Virtual Education has continued to

offer online professional development courses for certified staff through the eLearning South Carolina Professional Development (SCPD) program.

The courses that are offered are all technology integration courses and courses that help to lead to the Online Teaching Endorsement for South Carolina certified teachers and administrators. Courses are offered for both renewal credits and graduate credit to assist teachers in renewing their teaching license. Courses are taught by current classroom or former classroom teachers that have demonstrated exemplary skills in integrating technology into their daily lessons.

The main purpose of taking courses through the program is to ensure teachers have the skills to enhance their daily instruction by including technology in every way possible for the benefit of the students. Through taking these courses, we are more assured that teachers are preparing their students for becoming good digital citizens and are prepared with 21st century skills.

The eLearning SCPD program currently serves over 3,000 teachers annually and is



growing at an exponential rate. In 2013, the online professional development program will be expanding to offer several new programs including an option for rolling enrollment.

Through this new program teachers will be able to enroll in a course of their choice at any time and begin work right away. Teachers will have a flexible schedule to complete the coursework on their own timeframe within a sixty day period. Teachers will be given pre-assessments and post-assessments to ensure that they are learning new skills to embed technology into their classrooms.

Each course will be completely competency-based, which means each class participant will have an individualized experience in the course based on their needs and the skills that they already possess. Class participants more advanced in technology will learn new skills and more advanced topics, while those just learning the basics of technology will see more basic level topics to ensure each class participant is receiving the coursework and material that best enhances their learning. Several courses such as this will be developed over the next year to better accommodate teachers.

SCETV Teacher Training

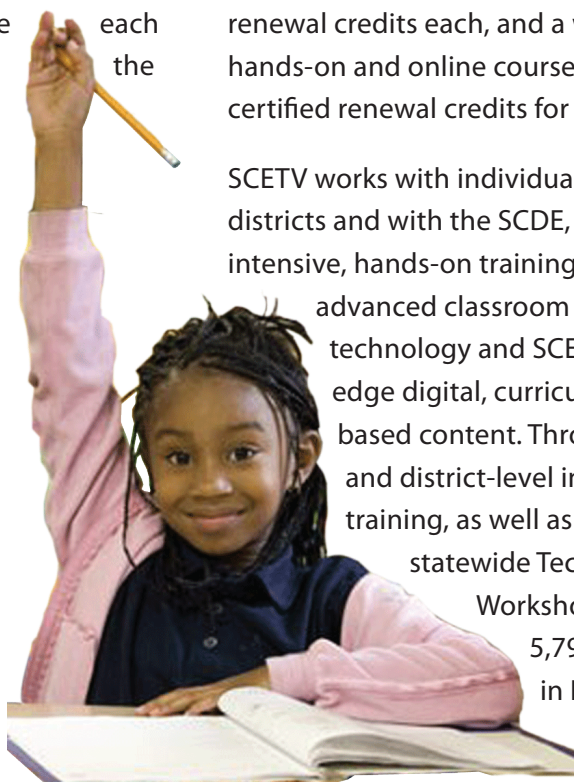
It is vitally important to the success of the state's K-12 education undertaking that teachers be as well-equipped as possible. This goal, accomplished in part through pre-service and in-service training, is necessary when

dealing with the intense demands of lesson development and delivery, advancements in educational technology and accurate assessment of teaching and learning outcomes.

SCETV also contributes to developing and maintaining teachers' and administrators' professional capacity through online, on-demand professional development content as well as through an energetic program of face-to-face training in K-12 instructional technology and administration. SCETV's online teacher recertification efforts grew due to the transitioning of the State Department of Education's eMedia Department to the Office of Virtual Education.

In addition, SCETV added a new blended training series introduced at the end of the 2012-13 school year. SCETV's Education department expanded and upgraded 39 certified teacher certification courses for 20 renewal credits each, and a weeklong blended hands-on and online course that awards 60 certified renewal credits for teachers.

SCETV works with individual schools, school districts and with the SCDE, to provide intensive, hands-on training in the use of advanced classroom educational technology and SCETV's cutting-edge digital, curriculum standards-based content. Through its school and district-level in-service training, as well as through statewide Technology Training Workshops, SCETV trained 5,798 educators in FY 2012-13 to make better use of advanced



K-12 classroom technologies, to facilitate personalized learning environments, and to introduce resources to assist Common Core pedagogy.

Discus and StudySC Professional Development

The South Carolina State Library offers technology integration professional development opportunities for teachers, counselors, librarians and media specialists through a variety of means including Discus and StudySC presentations at conferences, instructional fairs and technology forum exhibits. Presentations have also been made to the South Carolina Independent School Association (SCISA) as well as to the University of South Carolina's School of Library and Information Science students. These professional development offerings are designed to familiarize educators with the electronic resources available to them and the entire K-12 community for research and homework help.

As a result of the extensive Discus evaluation project conducted during the prior year and the resulting changes in the resources, it was especially important in FY 2012-13 to provide educators with professional development opportunities for learning about the new content and features. During this transitional year, 90 professional development opportunities were held for K-12 educators, 25 of which were offered online, with a total of 1,644 educators attending the offerings. In addition, exhibit booths at three major statewide conferences targeted to K-12 participants further extended the Discus and StudySC message to 357 booth visitors.

Instructional Capacity

South Carolina Technology Plan Goal:

Use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

Partnership Efforts to Support the Goal:

A generation ago, classroom instructional capacity was gauged by whether there were enough textbooks for students and whether the teacher had properly devised lesson plans based on the adopted texts. Today, educators must access and include in their instructional strategies rich media resources such as interactive simulations, streaming video, online reference literature and even digital textbooks and materials. Whereas once, “audiovisual support” of lesson plans might be something that learners experienced only in the classroom two or three times each semester, today’s teaching/learning continuum is characterized by daily multimedia support via online and other digital content.

“It is critical that a sufficiently robust wired and wireless IT infrastructure exists in public schools and libraries to support the standards-based learning content.”

Teachers and learners no longer access and leverage this content solely in the classroom, but instead, connect to it wirelessly in a variety of settings including in the school’s media center, in the cafeteria or from public libraries outside of scheduled class time. It is critical that a sufficiently robust wired

and wireless IT infrastructure exists in public schools and libraries to support the standards-based learning content supplied by South Carolina ETV, the South Carolina State Library, the South Carolina Department of Education and other sources.

The K-12 School Technology Initiative’s partners have made tremendous strides in their efforts to help achieve these goals through a variety of successful programs. One example of such programs is:

Digital Education Service Centers

One means of achieving this goal is through the use of South Carolina Educational Television’s (SCETV) Digital Education Service Centers. Old analog televisions and RF cabling are quickly disappearing from today’s classroom. Television is now being delivered through the district’s computer network. Video and other multimedia classroom resources that support curriculum and professional development are housed on district network servers.

SCETV actively supports the transition to district Internet Protocol (IP)-based systems. These systems are managed by

Digital Education Services (DES) personnel. Qualified DES Instruction Technology and curriculum support personnel are provided by each respective school district and are designated to address local learning challenges.

Various Internet Protocol (IP)-based systems

are utilized in 72 of the state's 81 school districts with systems. SCETV supports the IP systems, broadband technology and infrastructure needed by K-12 schools and districts.

SCETV also helps install and support content host servers, and streaming encoders that provide secure, safe deliveries that protect the integrity of content and efficiencies of web access. This support also includes the planning, installation and limited maintenance of equipment necessary to receive live broadcast/multicast and on-demand programming.

Schools are empowered with the ability to view live broadcast and archived video that originates within the local school, district, or anywhere in the state or nation. Programs recorded and archived on the system's local media servers contain dependable SCETV, including ETV StreamlineSC and PBS programming, South Carolina Department of Education (SCDE) content, local district and other qualified K-12 resource providers.

What's at Stake?

Education in South Carolina...

81

School Districts

145

Branch Libraries

1,223

Public Schools

58,831

Instructional Staff

729,969

Students

4,625,364

Citizens

1

South Carolina

Support Capacity

South Carolina Technology Plan Goal:

Expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting state academic standards.

Partnership Efforts to Support the Goal:

In today's K-12 educational environment, with its complex funding landscape and multiple layers of accountability, the capacity to quickly and accurately record, retrieve, analyze, report and act upon data related to student outcomes and demographic profiles is mission critical. However, it is also essential to ensure that the protocols and processes for collecting, safeguarding, analyzing and reporting such data are uniform system-wide.

"In today's educational environment, the capacity to quickly and accurately record, retrieve, analyze, report and act upon data related to student outcomes is mission critical."

This requires an enterprise-wide student information system that has the capacity to deal with vast amounts and constantly-changing volumes of data. In addition, such an enterprise level data management system must be agile and intuitive enough to provide a flexible and effective day-by-day management tool for administrators and educators.

A statewide data management system capable of supporting all public school districts and schools in the state, such as the PowerSchool student information system currently in use by the South Carolina

Department of Education (SCDE), necessitates a robust, high speed, highly reliable and high-capacity broadband network.

The K-12 School Technology Initiative's partners have made tremendous strides in their efforts to help achieve these goals through a variety of successful programs. Such programs include:

PowerSchool

PowerSchool (PS), South Carolina's student information system, is a tremendous asset in the efforts to aid the Support Capacity goal. Through PowerSchool, all public schools and districts in the state use the same student information system which allows greater

attention to be placed on improving efficiency and effectiveness of data entry, data management and data use.

PowerSchool provides school districts with the capability to input, store, update, manage and report student enrollment, demographic, attendance and other school related data. The enhanced capabilities of PowerSchool also allows for more accurate reporting of student data on enrollment, attendance, program participation and demographics, for funding, accountability, program management and research and evaluation purposes.

Over the past two years, SCDE has added to PowerSchool the ability for administrators to track school level student behavioral incidents, using a new custom-designed PS

component called the Incident Management System (IMS). In addition, PowerSchool has also added the ability for educators and administrators to create Individual Graduation Plans (IGP) to monitor individual student progress in meeting all the requirements necessary for high school graduation. These new custom modules have been provided to districts in such a way that the data is now created and stored as part of the PowerSchool data which is collected from each district in the state on a regular quarterly (45 day) schedule throughout the school year.

Enrich Assess

During the same time period, SCDE has also completed the development and statewide deployment of the Enrich Assess system. This new application provides school districts with a tool for managing local assessment data – data from diagnostic tests that help educators identify the strengths and weaknesses of each student in order to inform development of individual student learning plans, and teaching and learning strategies. Enrich Assess also offers the ability to easily track and analyze student academic progress, develop plans for at-risk students and identify groups of students for differentiated instruction.

Student Potential Performance Snapshot

SCDE, working in conjunction with educators and guidance counselors from a variety of school districts, has developed the Student Potential Performance Snapshot (SPPS). This new application helps identify at-risk students based on school attendance, student performance on state assessment tests and behavioral data. The SPPS At-Risk Indicators are now widely used by school districts and

school administrators, guidance counselors and teachers to support decision-making and intervention strategies.

South Carolina Longitudinal Information Center for Education

One of the most exciting, ambitious and significant new initiatives that SCDE has focused on over the past year has been the development of the Statewide Longitudinal Information Center for Education (SLICE). This project was initially conceived and funded by a federal grant through the American Recovery and Reinvestment Act of 2009 (ARRA) Statewide Longitudinal Data Systems (SLDS) Program.

South Carolina's ARRA SLDS Grant project proposed to create a statewide longitudinal data system for public K-12 education data. One of this grant's major objectives was to create a longitudinal data warehouse to store student enrollment and academic achievement data that could be used to address questions about the effectiveness of particular teaching and learning strategies on student outcomes.

Over the past 12 months SCDE has made the SLDS concept a reality. The SLICE system has now been built and populated with historical data from the past five school years. SLICE includes district, school, classroom and student enrollment and academic achievement data, as well as selected early childhood data, higher education and career/workforce participation data. Over the course of the coming year, the data in SLICE will be made readily accessible to educators and administrators, and summary data will be available more broadly to researchers, policy

makers and the general public, through a series of SLICE data dashboards. Over time, the plans for SLICE include development of a series of standard reports that users will be able to generate, as well as access to advance data analysis and reporting tools for research.

The SLICE system is currently available for use by school districts and will be made available to the general public over the next several months. During the course of the 2013-14 school year, SCDE will be actively working with school districts to provide hands-on training to help educators use the data and information in the SLICE system to make informed decisions about what steps they can take in their classrooms to improve student performance and student learning.

In its planning and collaborative efforts for SLICE, SCDE has been mindful that ultimately these technology intensive and data focused initiatives must all work together in order for them to have a significant impact on teaching and learning. To address both the effectiveness and sustainability of these projects, SCDE has engaged in a number of activities, including:

- Worked to redesign the PowerSchool data collection, validation and data extraction processes to make PowerSchool data easier to use and more readily available to districts for their own uses.
- Leveraged K-12 School Technology Initiative funding with federal grant and state support to build and deploy SLICE and related applications for district and school educators and administrators.
- Involved districts in the creation of SLICE

taskforces – a SLICE Technology Group, SLICE Training Group and SLICE Data Group.

- Developed and conducted a series of webinars to introduce districts to the SLICE Program and begun the process of exploring how SLICE can be used in schools.
- Established a Data Quality Initiative, with active involvement of school districts and schools, to address ways to improve data accuracy and timeliness, by redesigning data input processes for PowerSchool and other information systems that provide data to SLICE.

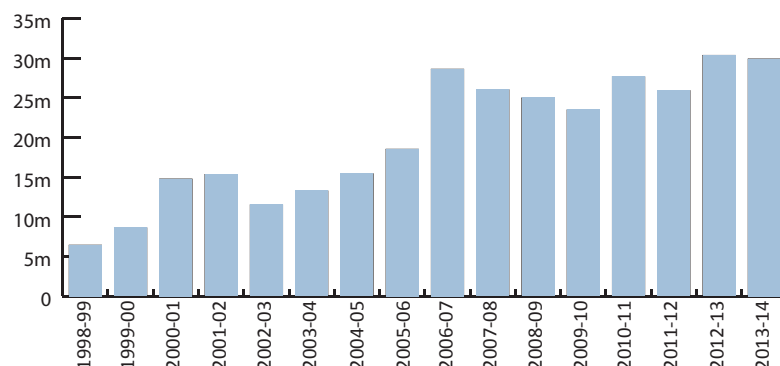
Expansion of Broadband Infrastructure

Since 2010, the South Carolina Budget and Control Board's Division of State Information Technology (DSIT) has strived to expand the states' public K-12 schools and libraries network connectivity. The main focus of this effort is designed to provide a stronger foundation for K-12 students and teachers as they prepare for the 21st Century's new educational technologies. Statewide, additional Metro Ethernet and direct fiber-based circuits have been deployed, increasing high-capacity broadband connectivity while decreasing the unit cost of that connectivity.

Internet and Network Connectivity

The accelerating evolution of technology constantly drives the need for schools and libraries across the state to secure more Internet connectivity and network capacity. As these new technologies are helping to advance the State's education system, the use of more interactive digital learning resources, mobile computing initiatives, online

E-Rate Funding Year Commitments



standardized testing, real-time student data repositories and other communication are vital to the social and economic development of the Palmetto State.

DSIT and its fellow K-12 School Technology Initiative partners have taken these various bandwidth demand influences into consideration and continue to focus on enabling schools and libraries as they prepare for both current and future technology requirements. New procedures put in place last year by the K-12 educational partners will ensure timely and economical scalability of Internet bandwidth to public schools and libraries as new instructional and administrative needs are confirmed.

As a result of this approach, a new bandwidth allocation policy for Internet Access was announced in April 2013. This new policy objective is designed to provide up to 100 Mbps per 1,000 students of Direct Internet Access (DIA) or Managed Internet Service (MIS) to each public school district in South Carolina. Due to this policy revision, districts with close to 10,000 or more students are eligible for up to 1 Gbps or higher Internet bandwidth coverage. Library systems will be

provided a minimum 10 Mbps of DIA or MIS and additional bandwidth will be allocated when the need is confirmed by DSIT.

The deployment of this new policy has positioned the Palmetto State ahead of other states in addressing the national issue of ensuring our schools and libraries have the access to high-capacity broadband connects necessary to support a variety of 21st Century learning and digital environments. National initiatives proposed by the State Education Technology Directors Association's (SETDA) "The Broadband Imperative" and the White House's "ConnectED Initiative" advocate the need to expand affordable high-capacity broadband connectivity to ensure schools and libraries can obtain access to this resource. SETDA suggests a minimum bandwidth target of 100 Mbps per 1,000 users for K-12 school Internet connectivity by the 2014-15 school year. During the 2012-13 school year, DSIT began deploying a statewide bandwidth level coverage similar to this proposed target, but utilizing an "increase as necessary" approach designed to promote greater efficiency.

However, even with the achievement of providing additional high-capacity Internet

connectivity, school districts and library systems face the obstacle of utilizing this bandwidth inside their buildings. Internal infrastructure upgrades are needed to deploy wireless access in classrooms and library buildings, however in many cases the necessary funding remains inadequate. The K-12 School Technology Initiative is determined to take actions designed to assist in this effort during the 2013-14 school year.

E-Rate Program

Since 1998, the federal E-Rate Program has proved transformational for education technology in public schools and libraries across South Carolina. Today the support provided by this program is being utilized by DSIT to acquire and manage broadband service for the state's K-12 schools and libraries network. DSIT is also responsible for the administration of federal E-Rate program activities in the state of South Carolina. Administrative functions in this area include the preparation and filing of the annual E-Rate application for network connectivity – which is essential in providing Internet access to all state public schools and libraries – as well as assisting individual school districts and libraries with their own E-Rate applications. Such assistance is provided through the K-12 School Technology Initiative website and consists of current program news, resources and deadlines. Additional assistance is provided through a series of live training sessions held in multiple locations throughout the state.

As part of this program, DSIT files for the reimbursement of approved E-rate funding requests and administers the funds in addition to those appropriated by the K-12

School Technology Initiative. The financial resources received through these two sources are used to pay the vendors responsible for supplying network access to connect public schools and libraries with private side wide area networks (WAN). These networks meet a number of local needs and connect the schools and libraries to a central hub which, in turn, links each site to the Internet and access to numerous state resources. The funding support offered by the E-Rate program is essential to the continued expansion of education technology in schools and libraries statewide.

Bandwidth Monitoring Program

In an effort to ensure that connectivity and Internet bandwidth are best being used to serve the state's educational needs, the K-12 School Technology Initiative Committee has implemented a service offered by DSIT to provide security and monitoring of the Internet bandwidth utilization. As part of this service, DSIT assists school districts with the detection, prevention and handling of security breaches and virus attacks, as most districts do not have sufficient resources to manage this ever increasing threat.

Since the implementation of this effort in 2008, DSIT has deployed cyber-sentry servers in each of South Carolina's K-12 public school districts, as well as in several charter schools and public libraries.

K-12 School Technology Initiative funds will continue to play a vital role in sustaining and refreshing South Carolina's technology in order to maintain hardware, software, connectivity and infrastructure.

Conclusion

The IT infrastructure needed to support K-12 education in South Carolina's public schools and libraries is an end-to-end system which must undergo balanced updating and improvement in order to yield the greatest benefits to its users. In its simplest terms, this infrastructure consists of the IT components found outside of school and library walls that serve to link locations together and to the Internet, as well as the portion found within facility walls that extends service and functionality to each room and each user connected to the network.

South Carolina has leveraged state appropriations and Federal E-rate funding to provide much improved connections to the Internet and across wide area networks for public schools and libraries. But the provision of enhanced connectivity and bandwidth inside these locations – indispensable requirements for enabling one-to-one

computing initiatives, virtual

classes and schools, media-

enriched mobile learning

and powerful student

records and assessment

applications – is

emerging as a vital need

going forward.

Addressing this emerging

need is critical to efforts

designed to improve

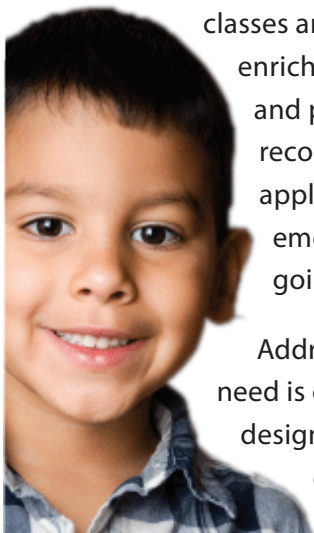
educational

outcomes in our

public schools, to ensure that public libraries are fully equipped to serve the needs of connected, mobile learners and to promote the creation of a competitive 21st century workforce in South Carolina.

“The provision of enhanced connectivity and bandwidth inside schools and libraries is emerging as a vital need going forward.”

The K-12 School Technology Initiative's partners are committed to improving funding for these urgently-needed IT upgrades inside public school and library walls, while continuing to fund and deliver invaluable, curriculum standards-based online video and interactive content and helping public schools and libraries finance sufficient Internet connection bandwidth to meet the steadily growing needs of modern learning practices.



Appendix A – Initiative Budget

FY14 K-12 Technology Initiative Budget Plan

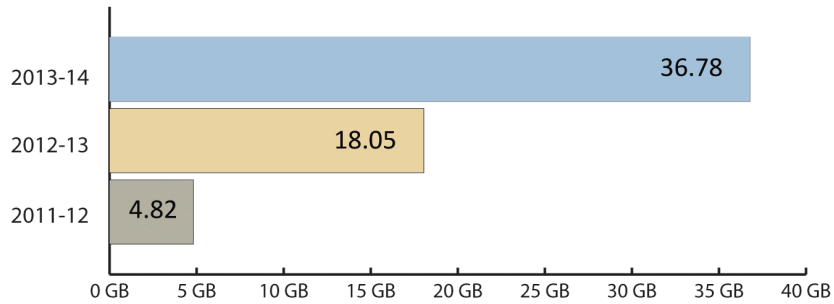
Approved
8/23/13

FY14	
Funds Available via Appropriations:	
State Library	\$1,960,095
SCETV	\$4,829,281
Base Appropriation: School Technology	\$10,171,826
Total Appropriations :	\$16,961,202
Carry Forward:	
State Library	\$0
SCETV	\$0
SCDE	\$1,763,033
B&CB / DSIT	\$316,595
Total Carry Forward :	\$2,079,628
Funds held from previous FY	\$0
Anticipated E-Rate Funds	\$22,500,000
Total Funds Available	\$41,540,830
Total Estimated Budget	\$41,540,830
Net Remaining funds	\$0

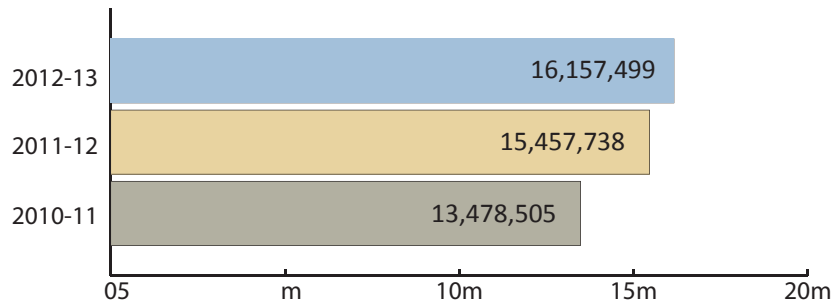
Budget Requests by Partner		Amount Requested	Appropriation Allocation	E-RATE	Approved FY14 Budget
	B&CB / DSIT				
1	Network Connectivity	\$30,246,000	\$7,746,000	\$22,500,000	\$30,246,000
2	E-Rate Field Training	\$500	\$500	\$0	\$500
3	Security Project for DIA/MIS	\$396,715	\$396,715	\$0	\$396,715
	Carry Forward from previous year		(316,595)		
		\$30,643,215	\$7,826,620	\$22,500,000	\$30,643,215
	STATE LIBRARY				
1	Discus	\$1,960,095	\$1,960,095	\$0	\$1,960,095
		\$1,960,095	\$1,960,095	\$0	\$1,960,095
	SCDE				
1	SC Virtual School	\$735,000	\$735,000	\$0	\$735,000
2	SC Online Professional Development (eLearning)	\$420,000	\$420,000	\$0	\$420,000
3	PowerSchool Professional Development	\$200,000	\$200,000	\$0	\$200,000
4	SIF Infrastructure Annual License & Maintenance	\$154,750	\$154,750	\$0	\$154,750
5	Electronic Transcript Annual License	\$225,000	\$225,000	\$0	\$225,000
6	eScholar Uniq-ID Annual License & Maintenance	\$54,250	\$54,250	\$0	\$54,250
7	State Educational Technology Plan 2014-17	\$85,000	\$85,000	\$0	\$85,000
8	Distribution to Schools	\$1,339,239	\$1,339,239	\$0	\$1,339,239
	Carry Forward from previous year		(1,763,033)		
		\$3,213,239	\$1,450,206	\$0	\$3,213,239
	SCETV				
1	ETV Infrastructure & District Technical Support	\$2,000,000	\$2,000,000	\$0	\$2,000,000
2	Teacher Training, Education Content Creation & Aggregation	\$2,829,281	\$2,829,281	\$0	\$2,829,281
3	StreamlineSC Content Subscription	\$750,000	\$750,000	\$0	\$750,000
4	Knowitall Content Upgrade	\$145,000	\$145,000	\$0	\$145,000
		\$5,724,281	\$5,724,281	\$0	\$5,724,281
	Total	\$41,540,830	\$16,961,202	\$22,500,000	\$41,540,830
* Net Appropriation Allocation			\$0 Balanced		
*note: Takes in consideration any carry forward funds from previous FY					

Appendix B – By the Numbers

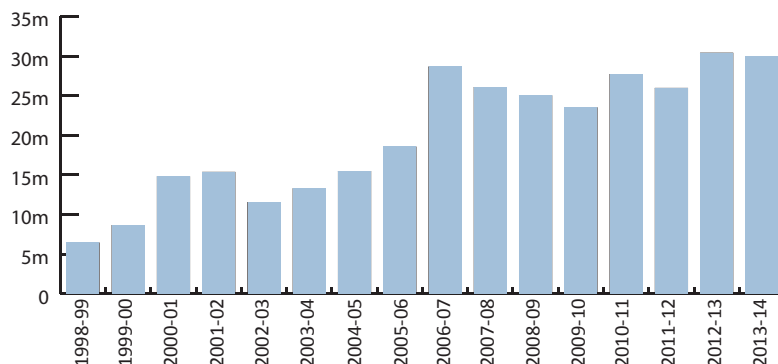
Growth of Bandwidth Demand in School Districts



Discus Usage (Items Retrieved)



E-Rate Funding Year Commitments



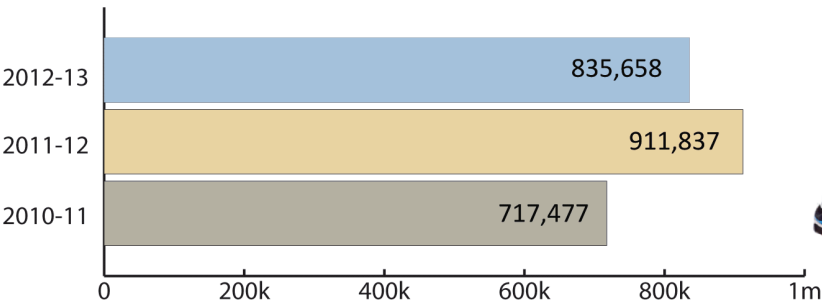
Appendix B – By the Numbers

Knowitall Utilization Comparison

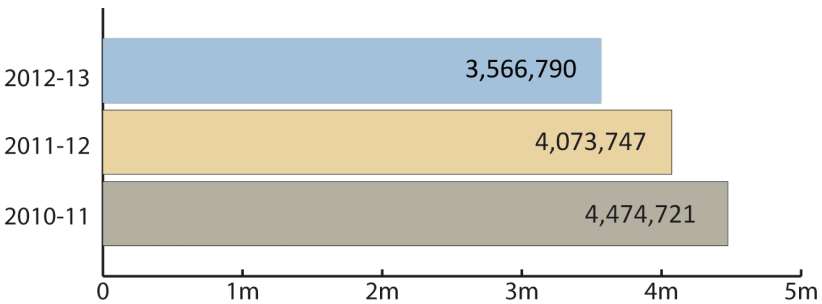
	2010-11	2011-12	2012-13
Visits	717,477	911,837	835,658
Page Views	4,474,721	4,073,747	3,566,790
Unique Visitors	497,080	783,816	621,165



Knowitall Utilization (Visits)

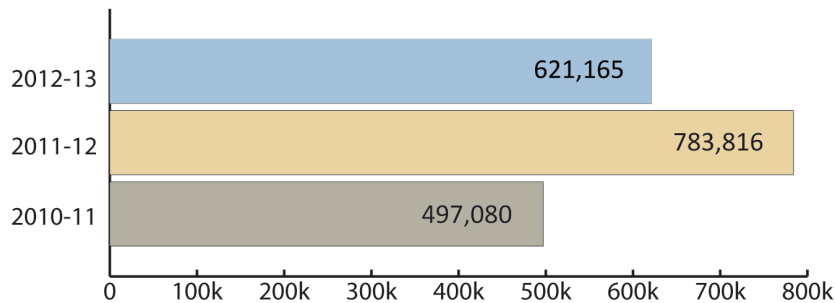


Knowitall Utilization (Page Views)

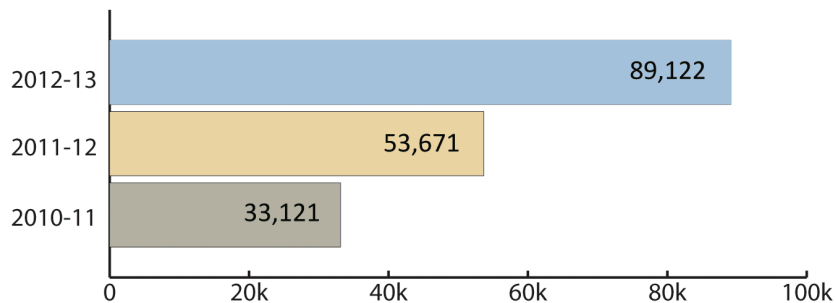


Appendix B – By the Numbers

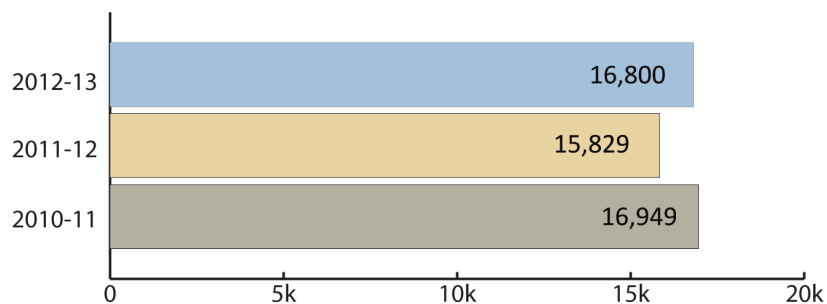
Knowitall Utilization (Unique Visitors)



StudySC (Visits)

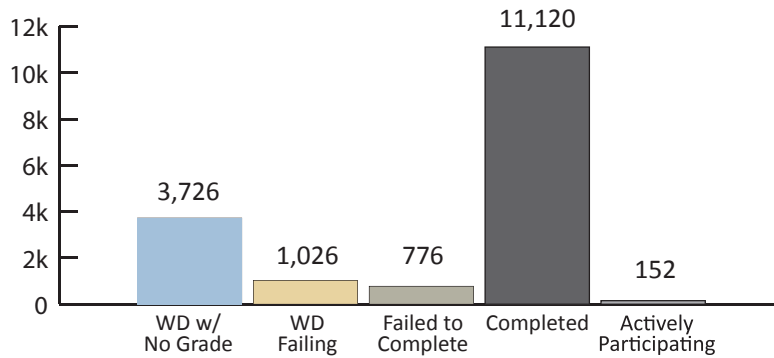


S.C. Virtual School Program (Students Served)

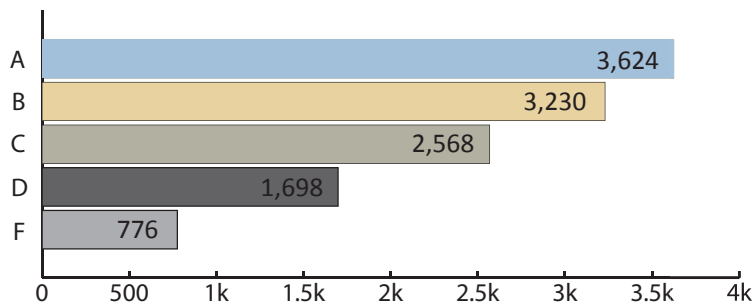


Appendix B – By the Numbers

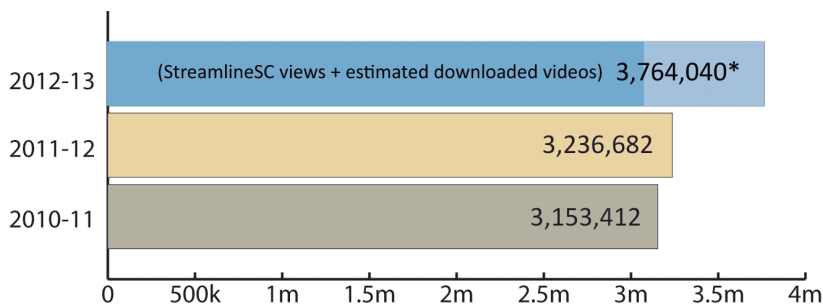
S.C. Virtual School Program (Enrollment Activity)



S.C. Virtual School Program (Final Grades)



StreamlineSC Utilization (Items Viewed)



Appendix C – Milestones

1996-97

- The South Carolina General Assembly created the K–12 School Technology Initiative.
- The K–12 School Technology Initiative began funding two-way video projects across South Carolina.

1997-98

- The K–12 School Technology Initiative distributed over \$12 million to state districts for local technology implementation.
- South Carolina Educational Television (SCETV) began digitizing its video resources for use in schools.
- South Carolina was recognized by the Educational Testing Service as one of five states to provide telecommunications access in all schools.

1998-99

- South Carolina received over \$26 million in E-Rate funding.
- 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).
- By 1998, South Carolina invested more than \$84 million in hardware, software and professional development opportunities for schools and districts.

- 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.
- 86% of South Carolina's schools were equipped with satellite dishes in order to receive education programming, compared to a national average of 29%.
- 67% of South Carolina classrooms were connected to local-area computer networks (LANs), compared to 53% nationwide.
- Technology Counts '98 reported that South Carolina was one of only five states in the nation to provide Internet access to 100 percent of its schools.

1999-00

- South Carolina, an E-Rate leader, received over \$42 million in funding.
- The South Carolina State Library's Discus Web site became available.
- The new electronic student-information collection system, Schools Administrative Student Information (ASlxp), was provided free to all districts.
- 100% of all state K-12 schools have digital satellite reception.

2000-01

- South Carolina E-Rate funding continued to climb to over \$52 million.
- State K–12 appropriations for educational technology funding

Appendix C – Milestones

- increased to over \$40 million.

2001-02

- The South Carolina General Assembly passed the Teacher Technology Proficiency Proviso, requiring districts to verify that teachers demonstrate technology proficiency during each recertification cycle.
- South Carolina received \$44,280,175 in E-Rate funding.
- The K-12 Partnership provided \$400,000 of funding, for technical training for district's technology support personnel.
- SCETV's Knowitall.org Web portal was officially launched.
- SCETV's Distance Education Learning Centers were operational in all school districts.
- The K-12 School Technology Initiative provided over \$18 million in flow-through funding to districts for local technology and training.
- The South Carolina Education Oversight Committee (EOC) issued its long-range planning document, citing 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.
- ETV American Graduate, a public media initiative funded by the CPB, helped SC communities find solutions to address the dropout crisis.

2002-03

- K-12 School Technology Initiative

funding decreased from a high of \$40 million in 2001 to a five-year low of \$19 million.

- South Carolina strongly encouraged its school districts to adopt the International Society for Technology in Educations (ISTE) National Educational Technology Standards for Administrators (NETS-A).

2003-04

- All state school districts were fully implemented and running SASIxp.
- The Division of State Information Technology filed the calculations for all schools and districts for the E-Rate Discount Program, resulting in over \$49 million for the state and school districts in discount payments.
- K-12 School Technology Initiative funding provided Intel Teach to the future classes to educators across the state.
- The South Carolina Department of Education released its Technology Plan, 2003-08: Realizing the Dream, to all South Carolina stakeholders.
- K-12 School Technology Initiative funding supported 30 Technology Coaches.
- SCDE's Office of Technology released a new SASIxp template and the Data Collections Manual, initiated quarterly collections and began to rely on the new South Carolina Educational Data System (SCEDS).

Appendix C – Milestones

- SCDE's South Carolina Online Professional Development, now known as eLearningSC, was officially launched.
- 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.

2004-05

- SCDE's ePortfolio project pilot was launched to assess teacher technology proficiency and to provide information on professional development offerings.
- SCETV's Internet video-on-demand service, StreamlineSC, was officially launched.

2005-06

- The South Carolina Legislature called for a feasibility study to investigate computer-based assessment in the state.
- SCETV's StreamlineSC reached 100% of the state's K-12 schools and had 1.3 million views within its first full year of operation.

2006-07

- The South Carolina Virtual School pilot was officially launched by the SCDE.
- SCETV's Knowitall celebrated its 10 millionth hit.
- SCETV's Knowitall launched two new sites, Knowitall Healthy! and Road Trip!

2007-08

- The State Library's Discus launched

its new Web site featuring Web 2.0 technology.

- The State Library began the implementation of SchoolRooms, an online multimedia discovery place for the K-12 community.
- The K-12 School Technology Initiative approved the implementation of a service offered by State IT to provide security and monitoring of K-12 Internet bandwidth usage.
- SCETV was able to procure a 1.94 Million dollar grant that begins SCETV's transition from analog video over microwave delivery of educational content to a streaming media delivery in 33 of 85 school districts.(Phase 1 IP Initiative).

2008-09

- SCETV launched OnePlaceSC, its newest K-12 education Web portal.
- SCETV launched Digital Education Services (DES), an upgraded service of the Distance Learning Education Centers (DEEC), designed to transition existing analog and digital broadcasts to live and video streaming on-demand systems.
- SCETV re-engineers media delivery systems in a manner that greatly reduces the cost from \$250k (approximate) to 55k – this enables many districts to include the system in their new school construction costs.
- SCETV streams live both ETV radio stations enabling the radio stations to be added to the ONEPLACESC

Appendix C – Milestones

programming guide lineup and for the general public to listen to ETV Radio on the Internet.

2009-10

- SCDE released the State Technology Plan for 2009-13.
- The State Library's Discus program launched SmartSearch, enabling the retrieval of information from multiple sources through a single "Google-like" search.
- The State Library's Discus program implemented IP geolocation technology through SmartSearch, thereby allowing students to be recognized as being in South Carolina and automatically granted access without the need for usernames or passwords.
- The State Library added a number of career and workforce development products to Discus including Ferguson's Career Guidance Center, LearningExpress Library and the NetLibrary Career eBook collection
- The State Library launched the StudySC.org Web site, a resource designed to provide online links and multimedia content for homework help, project assistance and classroom use.
- The State Library received a Presidential Citation Award from the South Carolina Library Association in recognition of ten years of Discus, South Carolina's Virtual Library.
- SCETV's StreamlineSC video-on-demand service had 3.16 million views during

the 2009-10 school year and the highest per-teacher video-on-demand usage of any such service in the US.

- SCETV's Knowitall portal had 6.01 million views in FY 2009-2010.
- SCETV's Web of Water site, part of Knowitall, was awarded a Corporation or Public Broadcasting MySource Education Innovation Award in March of 2010.
- SCETV's Digital Education Services (DES) systems were implemented in 44 of 85 state K-12 school districts.
- SCETV added new content to several of its most popular Knowitall.org Web sites, including Artopia, RiverVenture, Generations of Heroes, GullahNet, Educator+ and Career Aisle.
- DSIT filed E-Rate applications for network connectivity costs of \$22.7 million in eligible services in 2009-10 and received federal E-Rate reimbursements of \$13.8 million.
- The K-12 School Technology Initiative, in conjunction with Sate IT, developed version 4 of the Internet policy, designed to ensure the equitable use of available funds to supply sufficient Internet bandwidth to all districts.
- SCETV is able to procure a 1.4 million dollar grant through an agreement with SCDE. The ARRA grant monies would be used to add an additional 26 School districts to districts viewing all media via ETV's IP Media server technologies.
- SCETV now has 72 out of 81 school districts receiving all district televised

Appendix C – Milestones

media via streaming Media Server constellation.

2010-11

- ETV's website "Web of Water", received the nationally prestigious Corporation for Public Broadcasting (CPB) "Innovation in Education Award.
- The State Library's Discus Program implemented essentially 5 new products as Gale migrated the content of five of their Resource Centers to the new In Context interfaces. The products are Biography In Context, Opposing Viewpoints In Context, Science In Context, U.S. History In Context and World History In Context.
- The State Library and Discus focused on providing promotion, training and outreach for the Discus Job and Career Resources to adult educators and school counselors. These products include Ferguson's Career Guidance Center, LearningExpress Library and the EBSCO Career eBook Collection.

2011-12

- SCETV begins offering the new PBS Learning Media service.
- SCETV finalizes the EBS (Educational Broadband System) transition from 67 four-channel groups to a streamed down single channel per group (EBS mid-band) dedicated to transmitting ITV programming for all state school districts.
- SCETV develops and institutes an

agreement to migrate all StreamlineSC content to the constellation of IP Media servers, allowing all school districts to have a Streamline server on their internal Ethernet network. The higher capacity storage also enables the districts to have access to the entire StreamlineSC asset library.

- Through a CPB American Archive Content Inventory Project grant, SCETV inventoried over 100,000 physical and electronic assets and compiled a database of metadata that ETV will be able to access for educational and documentary projects.
- Discus and the State Library conducted an extensive evaluation project during much of FY 2011-12 resulting in a new collection for FY 2012-13. It will retain many of the most heavily used products while adding much needed content in other areas.
- The State Library forged a partnership with PASCAL (Partnership Among South Carolina Academic Libraries) which has helped to provide a richer array of resources utilizing combined funding efforts.
- K-12 School Technology Initiative Committee engaged DSIT to implement a security and bandwidth monitoring program to improve efficient use of network resources and to assist with identifying security risks.

2012-13

- Partners participated in TransformSC

Appendix C – Milestones

initiative

- SCETV partnered with Lexington School District 4 to provide literacy resources for their pre-K and K-3 students to include scholarships for facilitators of PBS “Raising Readers: Preparing Preschoolers for Success.”
- SCETV hosted a second American Graduate Youth Media Summit and Civil Rights Forum in the spring of 2013.
- SCETV added a new K-12 service, PBS LearningMedia, a media-on-demand service that features PBS award winning content.
- SCETV added a new social media site to support Common Core. The site uses Edmodo for teachers to share activities, best practices and useful web sites.
- SCVSP legislation was amended to lift the credit limitations placed on students. As a result, students are not limited on the number of credits that a student may earn toward a high school diploma through the program.
- SCVSP piloted eighth grade English and Math Intervention courses with approximately 150 students in two districts. As a result of this success, sixth and seventh grade English and Math Intervention courses were developed and offered in the summer of 2013.
- SCVSP partnered directly with schools to offer blended learning opportunities to help schools fulfill several needs from budget cuts, reduced funding and unfilled teaching vacancies at smaller schools across the state.

Appendix D – What Others Are Saying

Funding Needs

- “I already have a gigabit between my buildings... but only 100mb to the desktops. Money is needed to purchase switches to be able reach gigabit speed.”
(Don Wical, Williston School District 29)
- “The current Internet allocation of 100mbps/1000 students is greatly appreciated... but the near future (five years) will require 1gbps/1000 students and this will cause more problems with the internal network, specifically with network congestion.”
(Bill Brown, Greenville County School District)
- “What schools need is 1) a BIG pipe to the internet 2) A nice core switch in each school building and 3) a heavy wireless overlay to provide solid wireless access in the building. We don’t need ports in the classroom any longer as the future is tablet devices, and that means wireless.”
(Paula Yohe, Dillon School District Four)
- “I feel that the state needed to have a minimum for each district and this was a good approach in order to be fair to all. Moving forward this may need to be revised based upon one-to-one initiatives in each district. The state has always been ready to make adjustments to these types of policies as needed. The state has always obtained feedback and suggestions from districts before making unilateral decisions.”
(Paula Yohe, Dillon School District Four)

Discus

- “I am so very grateful for having Discus in our schools. Every time we meet to discuss the implementation of Common Core Standards and Assessments with New Balance Software, I bring up the fact that our students can navigate Discus to become acclimated in evaluation links and videos.”
(Ellen Bunch, Hendrix Elementary School)
- “Our school is small with a limited budget. Discus is our most valuable resource!”
(Dawn James, Aynor High School)
- “Our younger researchers can easily access information. They can listen to the information through the audio interface!”
(Angela Bennett, Logan Elementary School)
- “Discus is dependable, accurate and user-friendly, which is incredibly important when students are completing research projects.”
(Nikki Parton, Gray Court-Owings Middle School)
- “My K-5 and 1st grade students and teachers love BrianPOP Jr. I’d love to see BrainPOP added to Discus!”
(Kelly Knight, Fork Shoals School)

Appendix D – What Others Are Saying

- “Love BrainPOP Jr!”
(Kimberly Inabinett, St. George Middle School)
- “Love the new Discus! Thank you!”
(Cindy Haggerty, Welcome Elementary School)
- “I like the new databases added to Discus and am looking forward to a SmartSearch to be added.”
(Pat Wilcox, Sumter High School)
- “I feel as though the answer to any question is at my fingertips!”
(Comment from Training Participant)

E-Rate Training

- “Being new to eRate responsibilities for our district, the training for beginners was immediately applicable as soon as you I returned to the office in dealing with an Item 21 issue. I would not have known what this involved without the training!”
(Wally Hall, Greenwood County School District 52)
- “The School District of Newberry County utilizes the Federal E-rate program to provide Internet access, phone service and network equipment/maintenance. The classes that are provided at DSIT are vital in keeping us up to date on the new requirements and filing procedures as well as eligible services so that we may apply for funding.”
(Tina Palmer, School District of Newberry County)
- The E-rate program has played, and continues to play, a major role in the development and support of technology services for the K-12 educational community. The training provided to E-Rate Coordinators is essential. As the program has become more complex and as more applicants have experienced funding difficulties in one year or another, the assistance our State E-Rate Coordinator provides keeps applicants on track and in compliance with this ever evolving process.

Knowitall.org

- “Teachers frequently tell us that Artopia is the only place on the Web where they can see video of actual musicians playing and demonstrating their instruments.”
(South Carolina Philharmonic Education Staff)

SCETV Training

- “I use many services that PBS and SCETV offer. With the emphasis on STEM, I wrote a unit on engineering for elementary students based on PBS’s “Building Big.” The students rave about the research and labs in that one site.”
(Lynn Dempsey, Lexington School District One teacher, National Award Winner of the PBS 2012 Teacher Innovator Award)

Appendix D – What Others Are Saying

South Carolina Virtual School Program

- “I’m really glad that the South Carolina Virtual School Program was there, because without it I wouldn’t be able to graduate. Without this program, other students like me wouldn’t be able to graduate or even get more credits.”
(Student Testimony)
- “I personally enjoyed the online course in the South Carolina Virtual School Program. It was an amazing experience. I loved it, and it was very fun and a great learning exercise for those who want to take online classes.”
(Student Testimony)
- “This was the first time my son took a course through the Virtual School Program. I must say it was a very transparent experience and anytime he had a problem with something, the teacher responded either through the virtual email or Skype. He would have taken courses to better enhance his GPA if we knew about it starting in 9th grade, for he is pursuing a scholarship opportunity with football. I look forward for the law to be passed increasing the number of courses to be taken during a school term. This experience has prepared me to share with parents other options available to them. This program is as difficult as a brick and mortar school; it’s important to pace yourself to be successful. Staying on task is key or even working ahead. Thank goodness for the interactive vehicle of information.”
(Parent Testimony)
- “Our school has used SCVSP since the beginning. I love the idea of credit recovery being available for continuous sign up. This serves a great need. Thanks for all you do!!”
(Guidance Counselor Testimony)

StreamlineSC

- “Schools should enlist the help of SCETV Education Services for professional development. The content is relevant, the instructors are knowledgeable and best of all, the services are free!”
(Gedie Hagins, North Elementary School)

Teacherline

- “This course is pertinent for all adults who are involved with children in any way. The knowledge of child development, language development and computer games and videos is important to children’s self esteem and cognitive development.”
(Lexington School District Four Early Childhood Center Teaching Assistant)