

North Carolina e-Learning Commission
2010 Report to the North Carolina
Education Cabinet
Calendar Year 2009



State of North Carolina
Office of the Lieutenant Governor

WALTER H. DALTON
LIEUTENANT GOVERNOR
lt.gov@nc.gov

20401 MAIL SERVICE CENTER
RALEIGH, NC 27699-0401
TELEPHONE: (919) 733-7350

May 11, 2010

To Education Cabinet and Legislators:

Dear North Carolina Leaders,

I was honored in July 2009 to assume the role of Chairman of the North Carolina e-Learning Commission. The Commission has for the last five years been the steward of e-Learning growth in the State.

I am pleased to present to you the progress report of the e-Learning Commission for 2009. There are many accomplishments to highlight:

- The growth of e-Learning enrollments across every sector of K20 education in the state;
- The launching of a centralized e-Learning landing page, eLearningnc.gov, through which all public education e-Learning content is linked;
- The launch of several technology pilot programs across cloud computing, federated ID management, on-line proctoring, web conferencing, learning management systems and classroom capture that drive efficient innovation in technology in education; and
- The further creation of an education backbone network leveraging the existing North Carolina Research and Education Network (NCREN) and the awarding of Federal broadband recovery funds to MCNC to expand the reach of NCREN further into rural North Carolina.

We have accomplished these milestones with an overwhelmingly volunteer staff of dedicated leaders. We hope you are pleased with our continued progress.

Feel free to forward me any questions or comments.

Best regards,

A handwritten signature in black ink, appearing to read "W. Dalton".

Walter H. Dalton



TABLE OF CONTENTS

List of Acronyms in this Report	6
Introduction and Summary	7
2009 North Carolina e-Learning Commission Milestones and Achievements	7
Priority Recommendations	8
History of the North Carolina e-Learning Commission	10
Definition of eLearning	10
Organization and Operation	10
Growth of eLearning Offerings and Enrollment	11
North Carolina Virtual Public School	11
The North Carolina Community College System Online	12
The University of North Carolina Online	14
eLearning Offered by NC Independent Colleges and Universities	15
Goals and Recommendations	16
Recommendation 1: The North Carolina Education Cabinet	16
Recommendation 2: eLearning Standards	17
Recommendation 3: NCREN	19
Recommendation 4: Center for Online Professional Development	20
Recommendation 5: Technology Collaboration Council	24
Recommendation 6: eLearning Consumers Council	24
Recommendation 7: NC eLearning Portal	25
Recommendation 8: Data Mining and Dynamic Reporting System	31
Related Innovative Activities in 2010	35
ITS/MCNC Collaboration	35
Race to the Top and the North Carolina Education Cloud	36
Federated Identity Management	37
The North Carolina Learning Object Repository	38
Appendices	
Appendix A: e-Learning Commission Members, 2009	
Appendix B: eLearning Governance and Workflow in North Carolina	
Appendix C: Progress toward 2006 e-Learning Commission Recommendations	
Appendix D: WebMetrics Summary Report	

LIST OF ACRONYMS IN THIS REPORT

BETA	Business Education Technology Alliance
CCI	Cloud Computing Initiative
CEDARS	Common Education Data Analysis and Reporting System
CFNC	College Foundation of North Carolina
CSWG	Collaborative Services Working Group
eLC	e-Learning Commission
ESC	Employment Security Commission
FIM	Federated Identity Management
ITS	Information Technology Services
LEA	Local Education Agency
NCCCS	North Carolina Community College System
NCICU	North Carolina Independent Colleges and Universities
NCLOR	North Carolina Learning Objects Repository
NCREN	North Carolina Research and Education Network
NCVPS	North Carolina Virtual Public School
OPD	Online Professional Development
P-20+ SLDS	P-20+ State Longitudinal Data System
PreK	Pre-Kindergarten
RFP	Request For Proposal
RttT	Race to the Top
STEM	Science, Technology, Engineering, And Mathematics
UNC GA	University of North Carolina General Administration
UNC	University of North Carolina
VCL	Virtual Computing Lab
VLC	Virtual Learning Community

INTRODUCTION AND SUMMARY

The North Carolina e-Learning Commission is dedicated to creating and promoting a collaborative online learning environment that promotes student achievement, business success, economic stability, and lifelong learning for every citizen of North Carolina. Although building this eLearning environment will require a substantial initial investment, over time it can provide high-quality, personalized education while helping to reduce costs for buildings, maintenance, travel, and other operations. By offering anytime, anyplace learning, we can extend and equalize the educational opportunities available to citizens throughout the state.

Leveraging the eLearning environment that already exists in North Carolina requires the active participation and collaboration of many players. To ensure that this environment works smoothly and efficiently, we must expand our existing statewide network to educational institutions at all levels. To simplify eLearners' search for appropriate instruction, we must organize access to eLearning opportunities in an understandable, user-friendly way. To fully use the potential of eLearning technologies, we must foster the development and dissemination of high-quality online learning resources. To ensure effective interface between instructors and eLearning students, we must provide high-quality professional development for our educators. To ensure that the education we provide through learning is of the highest quality, we must develop consistent eLearning standards and assessment methods for course development and delivery.

This report of the North Carolina e-Learning Commission to the Office of North Carolina Governor Bev Perdue, the North Carolina Education Cabinet, and the Joint Legislative Education Oversight Committee of the North Carolina General Assembly describes the existing eLearning infrastructure and environment of North Carolina, highlights calendar year 2009 milestones and achievements, and suggests collaborative ways to move North Carolina's education sectors toward a more seamless learning environment, a development that can bring North Carolina important benefits, both educational and economic.

2009 North Carolina e-Learning Commission Milestones and Achievements

- Based on nominations from the NC eLC, in 2009, North Carolina Governor Bev Perdue, founding chair of the commission, received three significant distance learning awards:
 - From the U.S. Distance Learning Association: The Eagle Award, presented to a nationally recognized public official who has demonstrated unique leadership in the public policy arena and has a longstanding record of educational technology support as well as the support of the USDLA mission, which includes serving the needs of the distance learning community by providing advocacy, information, networking, and opportunity.
 - From the U.S. Distance Learning Association: Recognition for Outstanding Leadership by an Individual in the Field of Distance Learning.

- From the N.C. Distance Learning Association: The Leadership in Distance Learning Award.
- North Carolina Lieutenant Governor Walter Dalton named chairman of the e-Learning Commission in July 2009.
- North Carolina's Virtual Public School (NCVPS) became the fifth largest virtual school in the country in terms of enrollment. In just two and a half years, the school has become one of the fastest growing virtual schools in the nation, serving over 50,000 enrollments since summer 2007. North Carolina continues to see rapid growth of over 70 percent per year in virtual school enrollment. The 2009-10 academic year posted more than 30,000 enrollments as of January, and is still accepting students.
- Completion of a major portion of the K-20 Connectivity Initiative with the connection of all 115 local education agencies (LEAs) to the North Carolina Research and Education Network (NCREN). This effort, led by Governor Perdue, the North Carolina General Assembly, the University of North Carolina system, NC State University's Friday Institute for Educational Innovation, eNC, and MCNC, has successfully laid the groundwork for ubiquitous and robust eLearning across K-20 in North Carolina.
- Completion of a plan to migrate all fifty-eight community colleges in the North Carolina Community College System to NCREN by the end of 2011-12. Twenty North Carolina community colleges are currently connected to NCREN.
- Evaluation of the pilot North Carolina eLearning portal, and a successful November launch of the North Carolina eLearning landing page at www.eLearningNC.gov.
- Assisted with defining online professional development within the framework of professional development. Online professional development will be included in North Carolina's Race to the Top (RttT) proposal to the U.S. Department of Education for funding under the American Reinvestment and Recovery Act.
- Supported development of the North Carolina 1:1 Learning Technology Initiative, which began in 2007 with eight pilot schools and now has forty-four LEAs operating, initiating, or planning 1:1 programs. A plan for a statewide implementation has been developed.

Priority Recommendations

Much of the work of the e-Learning Commission is based on a set of eight working recommendations that have guided the work of the commission since its inception.

Recommendation 1: The North Carolina Education Cabinet

Establish the e-Learning Commission as the NCVirtual (NCV) to coordinate eLearning across PreK-20. The Governor's Office and Education Cabinet members will assign staff to support the Commission and facilitate the coordination of eLearning across PreK-20.

Recommendation 2: eLearning Standards

Ensure that quality standards and policies are in place for eLearning across PreK-20.

Recommendation 3: NCREN

Endorse NCREN as the statewide education network for PreK-20 education.

Recommendation 4: Center for Online Professional Development

Develop a North Carolina Center for PreK-20 Online Professional Development to explore using online delivery methods to prepare teachers, faculty, and administrators to use technology to enhance teaching, learning, assessment, communications, and management.

Recommendation 5: Technology Collaboration Council

Establish a Technology Collaboration Council to assist in researching and identifying opportunities for collaborative infrastructure solutions.

Recommendation 6: eLearning Consumers Council

Establish an eLearning Consumers Council to provide input and feedback in order to ensure that the needs of North Carolina's eLearning consumers are effectively met.

Recommendation 7: NC eLearning Portal

Launch and sustain the production version of the North Carolina eLearning portal, a customized Web site that provides access to information about all eLearning resources offered by public and private educational institutions in North Carolina.

Recommendation 8: Data Mining and Dynamic Reporting

Develop an aggregated PreK-20 statewide intelligent data-mining and dynamic reporting system that will allow real-time access to information in a format that can be used to assist with decisions on personal learning plans for students, professional development plans for instructors, and resource-allocation decisions for institutions, districts, and entire systems.

HISTORY OF THE NORTH CAROLINA E-LEARNING COMMISSION

In September 2003 the North Carolina General Assembly enacted General Statute 115C-102.15 to create an alliance of key leaders including business, local and state policy makers, and educators to be called the Business Education Technology Alliance. BETA was charged with exploring ways to prepare a globally competitive workforce for the twenty-first century by expanding North Carolina citizens' educational options. Its specific focus was to focus on instructional approaches that can better accommodate individual and schedule differences, particularly by the use of technology. The founding chair of BETA was North Carolina Governor Bev Perdue, who, while lieutenant governor, was appointed chair of BETA by the chair of the North Carolina State Board of Education.

To establish a framework for fully integrating technology into PreK-20 education in North Carolina, in January 2005 BETA offered twenty recommendations, which led to the development of 21st Century Goals and Priorities for the State Board of Education, the first state virtual public school, an expansion of the existing statewide research and education network to include the public schools, and the creation of the North Carolina e-Learning Commission.

Based on a BETA recommendation, the State Board of Education and BETA established the e-Learning Commission in 2005. Its mission complete, BETA was retired in 2009. The North Carolina e-Learning Commission, chaired by North Carolina Lieutenant Governor Walter Dalton, remains North Carolina's education cabinet's main advisory group for technology integration in education.

Definition of eLearning

E-learning is defined in Session Law 2005-276-Section 7.41:

(b) As used in this section, "e-learning" is electronic learning that includes a wide set of applications and processes, such as Web-based learning, computer based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audiotape, videotape, satellite broadcast, interactive television, and CD-ROM.

There are many reasons for North Carolina to support eLearning, among them its potential to provide efficient, convenient, and fair access to a free public education for students throughout the state. E-learning is a vehicle by which North Carolina can meet its constitutional mandate for a free public education for all by providing educational opportunities for citizens representing all geographic, socioeconomic, and demographic spectrums. Increasing access in an organized way is one strategy for improving overall educational levels of the state's citizens, which is important for the state's economic future.

Organization and Operation

The North Carolina e-Learning Commission has thirty-six members, representing businesses, community colleges, public universities, independent colleges and universities, the Department of Public Instruction, virtual education content providers, superintendents,

teachers, technology directors, counselors, and the State Board of Education. Chairman Walter Dalton, North Carolina Lieutenant Governor; and Vice-Chair Tony Copeland, former president and CEO of Longistics, Inc., lead the North Carolina e-Learning Commission. The remaining thirty-four members serve on one of three subcommittees: Subcommittee on Legislation, Policy, Funding, and Accountability; Subcommittee on Curriculum and Instruction; or Subcommittee on Infrastructure. (See appendix A for a list of the current members of the eLC.)

The themes of academic integrity, accountability, flexibility, and service guide all decisions of the e-Learning Commission.

The eLC reports annually to the Education Cabinet, which in turn reports to the Joint Education Oversight Committee of the North Carolina General Assembly. (See appendix B for a chart that describes coordinated reporting for organizations supporting eLearning in North Carolina.)

GROWTH OF E-LEARNING OFFERINGS AND ENROLLMENT

The North Carolina General Assembly's investment in the K-20 Connectivity Initiative, the 2+2 Initiative between the North Carolina Community College System and the University of North Carolina system (including funding for the North Carolina Learning Objects Repository), and funding for development and acquisition of eLearning content paid huge dividends in 2009. North Carolina was able to leverage these wise investments to scale to rapidly increasing virtual learning demand.

The recent global economic crisis led to significant increases in higher-education eLearning enrollments during 2009. Seeking retraining and skills enhancement, displaced workers found online courses to be cost friendly and convenient. Online courses eliminated the travel costs of campus-based education and could be meshed with part-time jobs and job-search efforts.

At the K-12 level, several North Carolina school districts were left with critical unfilled teaching positions, which decreased the breadth and depth of course offerings. In this environment, online offerings offered a way to close the gap in equitable access.

The growth of eLearning enrollments in North Carolina in 2009 makes credible the prediction of *Disrupting Class* authors Clayton Christensen and Michael Horn that 50 percent of course enrollments will be online by the end of the coming decade.

North Carolina Virtual Public School

Launched in 2005, the North Carolina Virtual Public School was the first virtual public school established statewide in the United States. In November 2008, NCVPS was ranked as one of the top ten state-led virtual schools in the nation by Center for Digital Education. The report was produced with the advice and consultation of the Council of Chief State School Officers and the North American Council for Online Learning.

NCVPS provides expanded academic options to all NC high school students by offering online courses in subjects that may not be available at their local schools. NCVPS also offers online services such as test preparation, career planning services, and credit recovery. All NCVPS teachers are highly qualified and certified to teach in the disciplines in which they are assigned.

In summer 2009 the North Carolina Virtual Public School saved several North Carolina districts an average of \$50,000 on summer programming. Some districts used www.ncvps.org to deliver self-contained courses off site. Other districts used "blended" models of summer programming, where students worked with face-to-face teachers for a set number of days and then finished the course online and off site. Virtual course delivery saves money on facilities, instructors, class size, and curriculum resources. Rather than replacing teachers, virtual delivery consolidates resources in such a way as to maximize and repurpose existing school dollars. Virtual course delivery is cost efficient not just for summer programming, but for the normal school year as well.

In order to keep pace with best practices in class research and instructional delivery nationwide, NCVPS will continue to develop and plan a K-8 online-learning curriculum, to be piloted when expanded funding becomes available.

If trend data curves continue, NCVPS expects to grow at a projected rate of 50 percent annually.

Year	NC Virtual Public School Enrollment
2007-08	17,325
2008-09	16,885
2009-2010	38,240 (projected)

The enrollment drop in 2008-09 resulted from course corrections and retooling by NCVPS leadership. Since the retooling, course performance, completion, and satisfaction among school districts have been at program-history highs. NCVPS has become the key educational solution for school districts in North Carolina seeking to expand course access, offer targeted solutions (e.g., credit recovery), and/or to offer blended services (e.g., mastery learning modules and/or mobile learning course reviews).

The North Carolina Community College System Online

For more than a decade, the North Carolina Community College System has invested heavily in eLearning, collaborating both across the community college system and with other sectors of the North Carolina education community.

Hallmarks of the NCCCS eLearning environment are the system's 2+2 collaborative partnership with the UNC system, its participation in efforts to implement enhanced networked broadband connectivity, its Virtual Learning Community for developing shared

online content, its adoption of an enterprise course-management system, and its partnership in the Virtual Computing Lab with NC State University.

The growth of online curriculum and continuing education course enrollments in the North Carolina Community College System is astounding.

Year	North Carolina Community College System Online Student Course Enrollment
2005-06	166,197 (498,591 sch)*
2006-07	200,746 (602,238 sch)
2007-08	245,642 (736,926 sch)
2008-09	310,058 (930,174 sch)

* sch = student contact hours per week. Each course constitutes on average 3 sch.

The NCCCS has been the leader in developing the North Carolina Learning Object Repository (NCLOR), a resource that assists educators at all levels by providing access to multimedia learning objects to assist in course development. Currently, forty-seven NCCCS institutions are linked to the NCLOR, each capable of accessing and using over 6,600 interactive learning objects. The NCLOR federates with four other statewide or national learning object repositories (Florida, Georgia, Kentucky, and Merlot), making those resources available to NCCCS faculty.

The vehicle for collaborative course development is the NCCCS Virtual Learning Community®. The VLC was originally established in 1998 to develop the ten online courses most in demand at that time. The success of that early effort has evolved into the VLC of today, in which five VLC centers are in operation. Two of these centers concentrate on creating and improving online courses and resources with a special disciplinary focus: STEM courses (science, technology, engineering, and mathematics), and continuing education, vocational, and technical courses. The other three support centers interact and collaborate to provide support for quality assessment, professional development, and best use of technology.

The Virtual Learning Community has centrally developed 248 curriculum and thirty-eight continuing education online courses available to all NCCCS institutions. These courses collectively support thirty-three associate degree programs available to all institutions. The fifty-eight colleges within NCCCS report 156 online associate degrees, diplomas, and certificates. All fifty-eight North Carolina Community College System institutions offer one or more online degrees and have recently experienced a tremendous increase in online course enrollment.

Existing online learning technology also supports hybrid courses (blending online and traditional learning methodologies), supplemental Web resources for traditional courses, telecourses, and interactive video, totaling an additional 278,000 course registrations. This represents a significant value-added component to investment in online learning

infrastructure. NCCCS colleges experienced 10.4 percent growth in total distance learning enrollments from 2006-07 to 2007-08 and a 37.9 percent increase from 2007-08 to 2008-09.

While each NC community college maintains autonomy to remain responsive to local community needs, a culture of collaboration exists through which online courses and resources are developed centrally and shared with all institutions. This collaboration and cooperation enhances and expands online resources and support, and drastically reduces development costs of online courses used across the system.

Selection and implementation of NCCCS learning technologies are guided by a set of business requirements that ensure ease of use, effectiveness, and interoperability of all resources and applications while framed in economies-of-scale procurement strategies to maximize return on investment of state funds.

The University of North Carolina Online

Since assuming the post of North Carolina University system president in 2006, Erskine Bowles has brought an enlightened leadership to continue the movement of the UNC system as a major competitor in the global economy. He initiated a statewide effort called UNC Tomorrow to find out from North Carolina's citizens what they needed from the university system. One finding of UNC Tomorrow was that the citizens of North Carolina wanted to have greater access to courses offered by institutions in the UNC system.

President Bowles views online courses and degree program as one way to respond to the findings of UNC Tomorrow and also to respond to the growth in student population in the face of reduced funds for facilities.

President Bowles has charged UNC institutions with exploring collaborative ways to extend the benefits of online instruction to a growing student population. On July 1, 2007, the University of North Carolina launched The University of North Carolina Online (online.northcarolina.edu), a searchable Web site that aggregates all the degree, certificate, and licensure programs offered by the sixteen campuses of the UNC system. The goal of The University of North Carolina Online is to provide greater access to higher education for North Carolinians of any age. Special entry points are available for community college students, the military, and teachers.

The University of North Carolina Online is a reference site for other state university systems wanting to develop a common online learning site for their institutions. Individual institutions within the UNC system have moved on aggressive paths to develop and offer impressive suites of online learning offerings. UNC-Greensboro, East Carolina University, and NC State University are three of the best examples.

The technological infrastructure for the University of North Carolina Online is cutting edge and exceptionally well designed, with a flexible database that can accommodate future functionality. The infrastructure for UNC Online was developed under contract by LEARN NC and has received many very positive comments from users, developers, faculty, and administrators, inside and outside the system. UNC Online won the NC Distance Learning

Association's Award for 21st Century Best Practice in Distance Learning for 2008. GetEducated.com rates online courses offered through the University of North Carolina Online as a "best buy."

The University of North Carolina Online shares a help desk with the College Foundation of North Carolina (CFNC) for students who may need further assistance. The system has a backend customer-management system that collects data when information is requested from the campus or from UNC Online. In 2008 an inter-institutional online registration system was developed and implemented that allows students registered in one UNC institution to more easily register for an online course at another UNC institution. This technology also allows the tracking of a student across campuses using only their local e-mail address and password, a major breakthrough. This same system is being evaluated by the iSchool for tracking high school students taking online college courses.

Such efforts have led to a dramatic increase in online education in UNC institutions as noted in the chart below:

Year	UNC Online Unduplicated Online Student Head Count	UNC Online Student Credit Hours
2005-06	43,453	241,908
2006-07	52,797	304,556
2007-08	58,875	354,652
2008-09	74,006	439,628

There are currently over two hundred degree, certificate, or licensure programs fully online listed on the University of North Carolina Online site:

Total baccalaureate programs = 52

Total master-level programs = 75

Total doctoral-level programs = 2

Total certificate programs = 58

Total licensure programs = 13

Grand total = 200

eLearning Offered by NC Independent Colleges and Universities

Each of the thirty-six independent colleges and universities in North Carolina determines the amount of eLearning that is appropriate for its mission. While the primary focus of independent higher education is a residential experience that features small classes and

face-to-face relationships with professors, a number of colleges and universities have seen value for students in adding online or blended courses to the curriculum.

The greatest number of online courses offered by independent colleges and universities are associated with adult completion programs or graduate degrees. Students in such programs often work full or part time, and they value the independence and flexibility that eLearning offers. These programs can also draw students from around the world who can "attend" class together and converse with each other to provide a global perspective without physically being in the same classroom or even on the same continent.

GOALS AND RECOMMENDATIONS

Initially, the short-term goal of the eLC was to recommend to the State Board of Education in June 2005 a strategy for establishing what is now the North Carolina Virtual Public School. The longer-term goal of the eLC was to extend eLearning opportunities to all the citizens of North Carolina by developing a statewide technological and organizational eLearning infrastructure to complement and extend North Carolina's traditional educational institutions at all levels.

In 2006 the e-Learning Commission submitted a report to the North Carolina State Board of Education and the Business Education Technology Alliance. This report, "Worldwide Schoolhouse: A Global Vision for Learning in North Carolina," put forward fifteen formal recommendations. The first two recommendations addressed the eLC's short-term goal of establishing the North Carolina Virtual Public School. The remaining thirteen recommendations outlined actions and principles for building a coordinated and collaborative eLearning environment in the state of North Carolina. Most of the original fifteen recommendations, including the launching of the North Carolina Virtual Public School, have been essentially completed. (See appendix C for a matrix describing the first fifteen recommendations of the eLC and progress toward achieving them.)

In 2008, the e-Learning Commission, at the instruction of the Education Cabinet and then e-Learning Commission Chair Bev Perdue, crafted eight recommendations to govern the commission's work over the next five years. These eight recommendations include some follow-on actions to the original list of fifteen recommendations and launch some new initiatives, e.g., the development of a K-20 integrated data system. In September 2009 the Education Cabinet, led by Governor Bev Perdue, approved these eight recommendations as areas of focus and work for the e-Learning Commission. The remainder of this report will focus on the progress of the eLC toward achieving these recommendations in 2009.

Recommendation 1: The North Carolina Education Cabinet

Because the development of goals and standards for the North Carolina Virtual School requires a foundation of broad goals for PreK-20 education across the state, the North Carolina Education Cabinet, in collaboration with the Education Commission (commonly referred to as the Joint Boards), should develop goals and measures of accountability for PreK-20 education consistent with the governor's vision for education and economic

development in North Carolina. To facilitate this and other work, support staff for the e-Learning Commission should be established. This staff should work with the commission chair and vice chair and should communicate and meet with the Education Cabinet members or their designated staff regularly to coordinate and study issues as specified in General Statute 116C-1 and Section 7.28 (e) of SL 2007-323 House Bill 1473.

Responsibility: e-Learning Commission chair, vice chair, and subcommittee chairs

2009 Activities and Action Plan

After the Business Education Technology Alliance was disbanded in 2009, having completed its mission, the eLC assumed the role of NCVirtual, carrying out those duties as noted in Section 7.28 (e) of SL 2007-323 House Bill 1473.

The eLC chairman requested staff support from the Office of the Governor and from the Education Cabinet based on the commission's work plan, as approved by the eLC and the Education Cabinet. Going forward, the staff will work with the eLC chair and communicate regularly with the Governor's Office and Education Cabinet members or their designated staff to coordinate and study issues as specified in General Statute 116C-1.

In order for the eLC to carry out its work during fiscal year 2009-10 and 2010-11, the Governor's Office provided funds for staff support. eLC members either volunteered their time or provided it as an in-kind contribution based on regular job responsibilities.

Recommendation 2: eLearning Standards

The North Carolina Education Cabinet should ensure that standards are in place for e-learning across PreK-20 and should develop such standards if they do not already exist. These standards should guide the quality and rigor of eLearning courses, delivery mechanisms, access, and other structural needs across the state of North Carolina. The Education Cabinet should also review and advance policies that support infrastructure standardization and seamless transfer, especially in the areas of quality of course development, collecting student data, interpretation of the Children's Internet Protection Act, and delivering eLearning across PreK-20. To assist the Education Cabinet in developing these standards and policies, staff for the Education Cabinet identified in Recommendation 1 of this report should continue to implement the work of ELC as required in SL 2007-323 Section 7.28.(e). In addition, a research facility should be contracted to provide research and development services to assist in serving the needs of the Education Cabinet. An example of such a facility is the Friday Institute for Education Innovation, located at NC State University.

Responsibility: e-Learning Commission chair, vice chair, and subcommittee chairs

2009 Activities and Action Plan

1. In March 2009, the e-Learning Commission subcommittee chairs agreed to begin implementing the 2009 e-Learning Commission report recommendation to contract

with the Friday Institute for Education Innovation at NC State for various duties, including:

- a. Recommending and implementing content standards
 - b. Providing regulatory compliance assistance for student data collection and the Children's Internet Protection Act
 - c. Providing infrastructure assistance
 - d. Devising a framework for consistent delivery, student evaluation, and awarding of credit for course and/or content from higher education that is delivered to K-12. There is currently some inconsistency, for example, in the methods of delivery, student evaluation, and awarding of credit of Learn and Earn content between the community colleges and University of North Carolina system. As much as practicable, Learn and Earn content should be consistent regardless of the delivering entity.
 - e. Developing a consistent standard for eLearning/virtual learning professional development for instructors
 - f. Surveying the practice of eLearning globally and make recommendations to keep North Carolina a leader in the practice of eLearning.
 - g. Evaluating the impact of North Carolina eLearning policies and programs on improving student achievement. Groundwork for this evaluation was completed during 2008-09, including an analysis of relevant NC policies, a review of emerging assessments of twenty-first century skills, planning for relevant initiative goals and data systems, and the development of logic maps. Further work was delayed by the budget freeze.
2. The subcommittee chairs will develop a statement of work with the Friday Institute in early 2010, which will include details on each of the categories of activity mentioned above. Implementing this statement of work will await funding and completion of the Friday Institute's role as the main author of the State of North Carolina's Race to the Top program submission to the U.S. Department of Education.
 3. The subcommittee chairs agreed that each sector of public education individually should adopt curriculum standards that govern their intra-sector eLearning content. The recommendation is that each sector follow at a minimum the prevailing content standards within their sector. The Southern Regional Education Board is a well-respected regional education think tank that provides information on prevailing standards for virtual content. SREB could be used as a source for identifying standards for the sectors of public education in North Carolina.
 4. The subcommittee chairs recommend that in the case of intrasector content (content that is developed by one sector of public education for use in another

sector), the content developer should adopt the prevailing standards of the sector using the content for instruction.

5. The subcommittee chairs also recommend that North Carolina maintain its position as a leading state in standards adherence, standards input, and regulatory input. North Carolina has positioned itself to inform the practice, and the state should maintain this position.

Timeline

Date	Action
Ongoing	Friday Institute is engaged in similar work but no contract has been formalized between the e-Learning Commission and the Friday Institute
11/2009	Decision to wait until after Race to the Top funding decision to implement this work

Recommendation 3: NCREN

Virtual and eLearning require sufficient broadband connectivity through a robust network that provides secure and reliable service. The North Carolina Research and Education Network (NCREN) currently provides such service to the University of North Carolina system, many of the private universities and colleges, and some community colleges, and in May 2009 completed the task of connecting all K-12 North Carolina public schools districts (local education agencies or LEAs) to the NCREN backbone. At its September 2009 meeting, the Education Cabinet endorsed NCREN as the statewide education network for PreK-20. In addition, the community colleges, in collaboration with ITS and NCREN, should develop a plan no later than June 30, 2009, to transition all community colleges in North Carolina to NCREN.

Responsibility: e-Learning Commission Infrastructure Subcommittee

2009 Activities and Action Plan

The e-Learning Commission subcommittee chairpersons confirmed their commitment to this goal. At the end of June 2009, the North Carolina Community College System (NCCCS), ITS, and NCREN submitted a plan for migration of all North Carolina community colleges to NCREN by the end of the 2011-12 school year. This migration plan could be accelerated or delayed depending on available state funding.

Timeline

Date	Action
4/2009	NCCCS/ITS/MCNC begin to formulate: <ul style="list-style-type: none">• Customer needs of NCCCS member institutions• Technology requirements of member institutions. Particular focus on CPE, firewall and bandwidth requirements.
5/2009	First draft of a migration plan that meets NCCCS requirements
7/2009	Agreement for NCCCS migration in place.

2010 Activities:

On January 20, 2010, the U.S. Department of Commerce informed MCNC that it has been awarded \$28.22 million in broadband recovery funds as part of the American Recovery and Reinvestment Act. To secure this federal funding, MCNC pledged \$11.7 million of matching funds from its endowment and other private sources. MCNC will use the \$39.77 million on a project to upgrade substantial portions of NCREN in the rural southeastern and rural western parts of North Carolina, which have been served by short-term leases of limited amounts of bandwidth.

Over the last five years, growth in demand for bandwidth from K-20 students and researchers has made the practice of leasing bandwidth for the short term increasingly expensive. If such leases had remained the primary method of procuring rural bandwidth, public education entities would likely have experienced a rapidly increasing financial burden to keep NCREN operating.

The broadband recovery project will help keep NCREN's cost of operation relatively stable over the next decade and a half. Thanks to the award of broadband recovery funds, NCREN will be able to develop into a rare piece of critical education infrastructure that remains affordable to operate over the long term, and an education asset to build on for the future.

Recommendation 4: Center for Online Professional Development

The Education Cabinet should determine if an existing structure can be expanded to serve as a North Carolina Center for PreK-20 Online Professional Development, or should create a new center if no appropriate structure exists. The center will work with existing developers and providers of OPD to sustain and extend their programs, provide coordination and dissemination of OPD programs, ensure quality control, and foster the effective use of OPD to help meet the professional development needs of educators throughout North Carolina. The center will develop incrementally over a three-year period.

1. In the first phase, the center will establish quality-control standards and processes for OPD; inventory, review, and catalog existing online professional development

courses; and act as a repository and information clearinghouse for high-quality online professional development courses and new technologies relevant to OPD.

2. In the second phase, the center will conduct a needs assessment to identify high-priority needs for OPD; will add a core staff of course developers to convert existing face-to-face professional development courses to an online format in order to enhance access; will train course developers; and will organize teams to seek federal and other funding.
3. In the third phase, the center will add to its previous activities by using the needs assessment to identify high-priority OPD courses that are not yet available; and will create, contract to create, or motivate others to create new online courses or modules to fill those gaps. The process for creating the new online courses will be either through development teams based at the center or through an RFP process, depending on the volume of courses and determination of the most cost-effective approach.

Responsibility: e-Learning Commission Curriculum and Instruction Subcommittee

2009 Activities and Action Plan

1. The subcommittee chairs began 2009 with a realistic discussion of funding. While acknowledging that the budget situation in North Carolina would be very tight, the discussion reaffirmed that the financial needs for an online professional development center are as follows:

Year 1: \$1.2 million

Year 2: \$2.7 million

Year 3: \$2.7 million

After year 3: \$2.7 million in recurring funds

The subcommittee chairs believe partial short-term funding could come from cutting of travel costs that are associated with the current professional development model of onsite, instructor-present and -led delivery. Short-term funding could be obtained by eliminating duplication of effort in producing content and in streamlining administration across the organizations involved in OPD today.

They see the possibility of leveraging eLearningNC.gov to centralize access to existing OPD content produced by LearnNC, K-12, the N.C. community colleges, and the UNC system.

2. The NC Race to the Top proposal includes a large-scale initiative to develop a statewide professional development infrastructure for K-12 teachers and administrators, with OPD as a major component. The prior work of the e-Learning Commission informed the Race to the Top plan. If North Carolina receives the Race to the Top funding, the Center for Online Professional Development should be fully integrated into the overall statewide professional development plan.

3. The subcommittee chairs reaffirmed that the centralized OPD should be consistent with the core attributes outlined in the e-Learning Commission 2009 progress report, including:
 - a. Use of the North Carolina eLearning landing page (www.eLearningNC.gov), the Learning Objects Repository, and the professional staff of a centralized OPD facility as clearinghouse resources
 - b. Filling in the gaps in existing OPD content through targeted course development
 - c. Small, but highly skilled and knowledgeable, staff
 - d. Innovation and experimentation
 - e. Marketing and promotion
 - f. Grant writing for additional funding
 - g. Staying state of the art and integrating new technologies when building capacity
 - h. Gathering together of K-20 OPD organizations, particularly those that are state funded, to maximize their focus on serving their constituents and lessen their focus on administration through center resources or partner resources.
 - i. A scalable infrastructure that serves all organizations housed within the center
 - j. Production of reusable content
 - k. Leveraging of resources, including module repositories. Looking across pay-for-content sites for information.
4. The subcommittee chairs also created foundational design principles for the central OPD center. These principles included:
 - a. Collaboration in development of all levels of education
 - b. Inclusion of all levels of education
 - c. Accessibility to all levels of education
 - d. Accessibility to all levels of technological competence of users
 - e. Standards-based content
 - f. Scalability

5. The organizations that should provide primary input into the development of centralized center are:
 - a. LearnNC (K-12): Has high-quality content and will benefit from a center approach.
 - b. NC Net (Community Colleges): Focused on Learning Objects Repository, infrastructure, and establishing quality standards.

The subcommittee will also involve national and regional organizations such as the Education Development Center, Inc.; Southern Region Education Board; and TeachScape.

Next Steps

In March 2009, the Curriculum and Instruction Subcommittee recommended that a modest entry into phase 1 planning begin. Access to year one funds through state resources alone remains unlikely as calendar year 2009 concludes, but the subcommittee agreed that phase 1 foundational planning should begin so that when funding is available, potentially through federal RttT funding, work can begin on the recommendation.

While waiting for funding, members of the e-Learning Commission have begun some foundational work in the area of OPD, including taking an inventory of resources.

Subsequent steps, which will require funding, include:

1. Conducting an overlap and gap analysis of the current OPD organizations
2. Convening a group of leading NC OPD entities to discuss design elements of a center and potential leaders. LearnNC and NCNet are recommended to lead this discussion.
3. Convening a group of national leaders to provide input on design. iNACOL, Regional Lab@SERVE, USDLA, Education Development Center, SREB, and other organizations are candidates to participate in the design discussion.

Part of the evaluation should include benchmarking with other states. An effort called the NC e-Learning for Educators collaboration, which involves LEARN NC, DPI, NCVPS, UNC-TV, and the Friday Institute, has been incubated through this investigation. The North Carolina group is part of a large ten-state project, funded by a U.S. Dept of Education Ready to Teach grant, built around work at Education Development Center, Inc. This is a very successful project in seven of the eight states that have been involved for four years. North Carolina joined a year ago, and its membership has brought some new resources and expertise to the state. North Carolina will participate in a planned proposal to the U.S. Department of Education to continue and extend this work.

This evaluative step concluded in October 2009 in preparation for the North Carolina's Race to the Top submission to the US Department of Education. OPD is a key aspect of the state's overall statewide professional development plan within the RttT proposal, and many of the concepts developed for the e-Learning Commission are incorporated in the proposal. The

subcommittee chairs have seen considerable value in having OPD as part of the overall professional development plan, especially since many approaches now involve blended models.

Recommendation 5: Technology Collaboration Council

The NC Virtual should establish a Technology Collaboration Council with representation from all PreK-20 eLearning providers and all eLearning technology-service providers (specifically MCNC and ITS). The role of this council will be to research and identify opportunities for collaborative infrastructure solutions and to recommend to the ELC the implementation of such solutions as appropriate. The council will include three sub-groups: networks/connectivity, servers/storage, and applications/services.

The research role of the proposed Technology Collaboration Council is already being substantially met by the MCNC Collaborative Services Working Group. Rather than duplicating this effort, the MCNC Collaborative Services Working Group should expand to include representation from all eLC stakeholders, and eLC should adopt this group as the research arm of the Technology Collaboration Council.

Responsibility: e-Learning Commission Infrastructure Subcommittee

2009 Activities and Action Plan

Coordination with MCNC Collaborative Services Working Group (CSWG) has begun. The CSWG has formed an affinity group to research each e-Learning Commission recommendation and determine where the CSWG can provide thoughtful input. The CWSG has outlined where assistance can be provided. Some thoughts already coalescing:

Area	CSWG Assistance
Staffing of eLC	Help with candidate pools and interviews
eLearningNC.gov	Power user review and technical input
Professional Development Center	LEARN NC input, compelling content
Education Network	Prioritization of Web 2.0 and core services like the LOR that help make the case for the ed network

This will be an ongoing relationship and collaboration once the CSWG recommends parameters and input areas.

Recommendation 6: eLearning Consumers Council

The NC Virtual should establish an eLearning Consumers Council with representation from a broad geographic perspective and including students, parents, teachers, education advocacy groups, and the business community. The role of this council will be to provide

input and feedback to the ELC and the Technology Collaboration Council to ensure that the needs of North Carolina's eLearning consumers are being met effectively.

Responsibility: e-Learning Commission Infrastructure Subcommittee

2009 Activities and Action Plan

The eLC subcommittee chairs agreed that the council should seek input from users of all levels of expertise and experience. The chairs recommended seeking representation on the eLearning Consumers Council from groups outlined during the process of validating the North Carolina eLearning portal. These groups were established in 2008 and then consulted again in 2009 for the movement of eLearningNC.gov from pilot to the production phase. These groups were made up entirely of volunteers and were critical in the development of the landing page.

The commission subcommittee chairs recommended that the eLearning Consumers Council be formalized and become an important part of the state's e-Learning Commission structure. The eLearning Consumers Council should include representation from a broad geographic perspective of stakeholders, including students, parents, teachers, education advocacy groups, and the business community.

An outreach strategy and timeline for formation of a formalized eLearning Consumers Council will be developed when the commission gains full-time staff. Until full-time staff is employed for the commission, the eLearning Consumers Council will be convened on an ad hoc project basis.

Recommendation 7: NC eLearning Portal

The General Assembly should provide one-time funding to launch the production version of eLearningNC.gov and recurring funding to sustain the production version of eLearningNC.gov.

Responsibility: e-Learning Commission Infrastructure Subcommittee, assisted by the e-Learning Commission portal project consultant and marketing consultant

2009 Activities

On November 16, 2009, the North Carolina e-Learning Commission met one of its major goals: the launch of a single Web site providing links to all public-education virtual learning content in North Carolina. The final eLearningNC.gov site benefited from the diligent work of an advisory team made up of eLearning professionals representing K-20 public education across North Carolina. Special thanks go Alfred Mays, project manager, and Kay Zimmerman, marketing consultant, who led weekly meetings of an advisory team. An extensive overview of advisory team activities appears below:

Lessons from the Pilot Phase

The NC eLearning landing page was piloted from October 2008 to March 2009. In early April 2009, the e-Learning Commission subcommittee chairs heard a report from the e-

Learning Commission portal project consultant. The report detailed a project plan that would lead to the launch of a permanent North Carolina eLearning landing page by fall 2009. The report confirmed that funding was available to support the production site launch.

The pilot phase of landing-page development yielded several valuable insights.

1. Although the pilot portal met its proof-of concept objective, pilot participants asked for clarity on the intent of the site and more depth of content. Participants with minimal knowledge or experience with eLearning generally said that the site provided a wonderful baseline understanding of eLearning resources, but more experienced and knowledgeable users thought that the site needed better design and content.
2. The pilot portal met its objective for functionality, successfully providing a central site identifying North Carolina's eLearning resources. However,
 - a. Although K-12 general links were provided, specific content was limited due to the narrow focus (teaching) chosen for proof of concept.
 - b. The UNC system was concerned that the site caused duplication and delay in reaching UNC Online's resource links and search features. The UNC system recommended that the landing page be a quick pass-through site. This recommendation was accommodated in the final landing page design.
 - c. The community colleges' commitment to providing information for reference or engagement was yet to be determined during the pilot phase. The community colleges became very engaged in the final design process, proving great assistance and reference information.
 - d. The private and independent colleges' commitment to centralization of information was yet to be determined during the pilot phase. The level of their participation is developing now that the production portal is launched.
3. The pilot portal met its objective for navigation. The site was a pass through to content-based sites for the K-20 public education sectors in North Carolina and for the private colleges and universities.
 - a. K-12 : simple pass off
 - b. College: simple pass off
 - c. Career : simple pass off
 - d. Community: not defined, and excluded from the initial pilot; revisit definition for production phase

4. The pilot portal met its goals for user interface, providing a design and layout that matched the initial objective of access to general content. However,
 - a. User-registration level (tier of service) was not clear and needed to be improved. The commission was asked to consider not requiring registration for a user to access an additional site. This recommendation was implemented for the launch of the production site.
 - b. Although profile creation leading to personalization of content is of value, this functionality will be postponed until the sectors of public education are more familiar with it.
5. A recommended improvement was to provide for administrative level of access for content updates. Administrative function was limited in the pilot portal based on site structure, available resources, and platform. This improvement was implemented in the production version of the landing page.
6. The pilot portal met its goals for content provision, but during the production phase, general content references/links and testimonials from across K-20 must be clarified and highlighted, the "About" page must better describe the intent of the site and how it is to be used, and the FAQ section must be made more prominent, answering the questions:
 - a. Why is eLearning valuable to me?
 - b. What is eLearning?
 - c. How do I participate in eLearning?

Planning to Launch eLearningNC.gov

In April 2009, calling eLearningNC.gov the "preface and table of contents for eLearning resources in North Carolina," the e-Learning Commission vice chair and the sub-chairs endorsed several courses of action, based on feedback from the pilot and the portal project consultant's recommendation.

1. They reaffirmed the objective of the North Carolina eLearning landing page as a Web-landing page with design and navigation to lead users to general information about eLearning. Specifically, the landing page serves as a reference site for linking the public to eLearning services offered by North Carolina K-12 public schools, the University of North Carolina system, the NC Community College System, the NC Independent Colleges and Universities, and several affiliated organizations that address career advancement/professional development content.
2. They reaffirmed the definition and scope of the eLearning landing page as a guide to eLearning and a search-and-catalog clearinghouse for eLearning resources and activities that have been developed within various agencies and organizations in North Carolina. The site does not provide actual functional engagement in eLearning

activities or administrative functions for participation in referenced activities. It should provide administrators with the ability to identify user traffic and use that user base for content push and engagement where and when appropriate.

3. They gave direction on the functionality of the site:
 - a. The landing page will serve as the central site for identifying North Carolina's eLearning resources for K-12, the UNC system, community colleges, private and independent colleges, and affiliated organizations like LEARN NC.
 - b. Navigation will be based on major categories of interest, for example, K-12, college, or career development.
4. They established requirements for user interface:
 - a. Access to general content across various resources
 - b. User registration
 - c. Profile creation and personalization of content based on profile
 - d. Provide for administrative level of access for content updates and changes
5. They established requirements for content:
 - a. General content references/links and testimonials from across K-20
 - b. Why is eLearning valuable to me?
 - c. What is eLearning?
 - d. How do I participate in eLearning?

Site Development Timeline

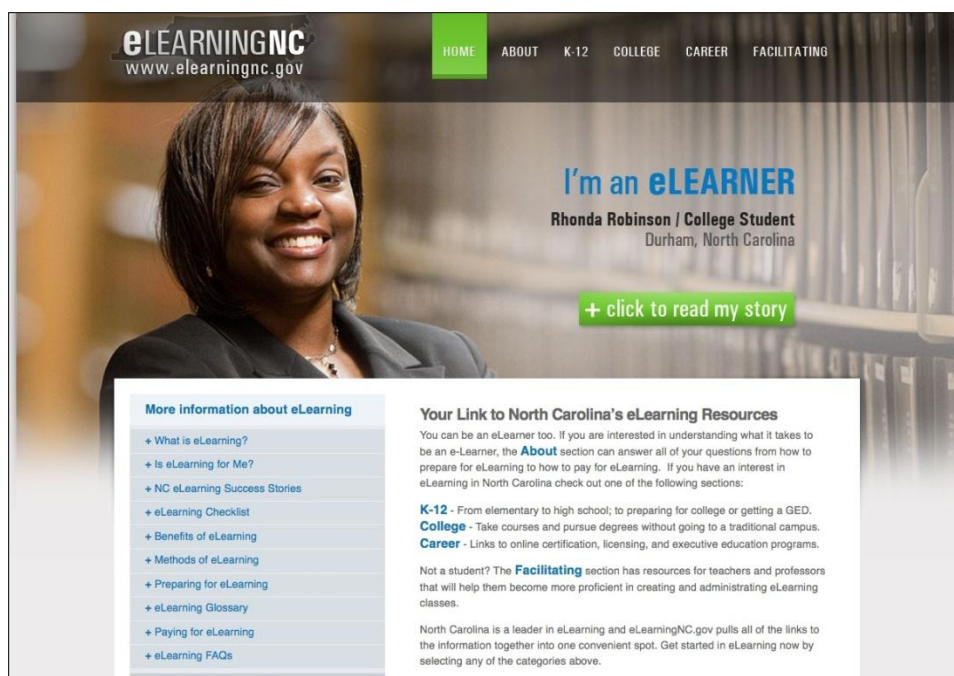
This broad direction led the portal project manager to outline two options for development of the production landing page. After deliberation, the subcommittee chairs chose to adjust the existing requirements and add new content requirements and other integration variables to include an objective of higher-level user engagement, policy and standards accountability, and other related activities.

5/2009	Determination of modified site objectives and scope Project definition based on new goals and objectives Feasibility assessment and testing on existing U-Portal code Comparison analysis of other platforms for consideration
--------	---

The key decision was the selection of a platform, and the decision was to move away from the U-Portal framework used during the pilot phase, which the advisory team considered cumbersome, difficult to update, and too proprietary. This led to the following work timeline:

6/2009	Prepare and distribute RFI based on updated requirements and findings Business/process, UI, administrative/service, content/information
7/2009	Review RFI and select vendor for production planning and development Research and analysis of new requirements Design architecture and visual design Internal page comps Code templates based on comps Existing content population
8-9/2009	Flash interactive modules Video editing and enhancements Form creation Search optimization Build out of UI (registration/personalization) based on wider range of utilization
10/2009	Determination of content administration and processes Content population (information, active, teaching & learning) Categorization of content Testing of applications
11/2009	Analytics and metrics Demo to eLC Marketing and awareness campaign planning Launch production landing page

The formal launch of the state of North Carolina's eLearning landing page took place on November 16, 2009. Serving as a preface and table of contents for public education and private college and university eLearning content and degree programs in the state of North Carolina, eLearningNC.gov combines a beautiful landing page with an easy-to-navigate taxonomy. Below is an example of a "hero shot" on the landing page.



Supplemental Materials

WebMetrics Summary Report of Usage Statistics from November 15, 2009, to January 5, 2010 (appendix D).

Next Steps

In the first quarter of calendar year 2010, the site will be marketed intensely through search-engine optimization, traditional print, and broadcast advertising. Budget exists to support the initial Q1 calendar year 2010 phase of marketing. In addition, depending on budget constraints, the following activities may be undertaken:

1. eMentoring and Integration with Career-Advice Applications: The eLearningNC.gov team may integrate career-interest assessment and eMentoring into the functionality of the site. This will allow users to assess their career interests, to define an educational path that aligns with their career interests, and to interact virtually with a mentor who currently works in their career field of interest. This will likely be accomplished via partnership.
2. Personalization: The eLearningNC.gov team may pursue adding functionality allowing the user to create and save a personal profile. Such information can be used by institutions to push virtual education opportunities to the targeted users. This feature is relatively expensive and will be attempted only if budget is available.
3. Linkages to professional certifications: Further develop linkages to public education virtual offerings that lead to professional certifications across technology, program management, business, and other fields. An example would be aligning Western

Carolina University's program management major to elearningnc.gov users seeking program management professional certification.

4. Exporting North Carolina's eLearning Content: With over 4,500 courses and three hundred degree programs online, North Carolina boasts one of the richest content repositories in the country. Marketing efforts for eLearningNC.gov will focus on capturing virtual learning demand from around the globe through search-engine optimization strategies and other targeted marketing. eLearning has the potential to become North Carolina's next great export.

Recommendation 8: Data Mining and Dynamic Reporting System

To provide a foundation for the dynamic and personalized environment that ubiquitous access to eLearning content requires, the Education Cabinet should develop an aggregated PreK-20+ statewide intelligent data-mining and dynamic reporting system that will allow real-time access to information in a format that can be used to assist with decisions on personal learning plans for students, professional development plans for instructors, and resource-allocation decisions for institutions, districts, and entire systems.

Responsibility: North Carolina Education Cabinet and North Carolina P-20+ working group

2009 Activities and Action Plan

Each sector of public education in North Carolina (early childhood, PreK-12, community colleges, and the UNC system), collects mountains of data related to student biography, student achievement, instructor professional development, instructor competency, instructor satisfaction, institutional success, and many other subjects. But even within the specific sectors of education, we have limited ability to aggregate data from various data repositories and employ data dynamically to make student, classroom, school, district, or system-wide decisions.

Aggregating or building a system linking these comprehensive but siloed datasets into a dynamic system of delivery will give us the information we need to make good decisions and midcourse corrections when appropriate. The network infrastructure is already in place in most cases to develop and properly implement such a system. It is now time to move toward this more comprehensive approach.

Aggregated data will provide accountability across the range of public education, allowing us to identify, develop, reward, and retain excellent instructors, especially for the students who need them most. We need to amass data-driven evidence, and we need to go where it takes us.

Finally, after we have the capacity for data-based decision making, we must support it by a comprehensive system of professional development to train instructors, administrators, parents, and students in how to interpret, manipulate, track, and use data for direction and decision making.

Diligent work on several facets of an integrated data-mining and reporting system for PreK-20+ education in North Carolina is progressing well. The Education Cabinet recently

endorsed the North Carolina P-20+ working group's current effort to plan and develop a P-20+ State Longitudinal Data System (SLDS). The P-20+ working group consists of representatives from the NC Department of Public Instruction (NCDPI), UNC-General Administration, the NC Community College System, Employment Security Commission (ESC), NC Independent Colleges and Universities (NCICU), and Early Childhood (B-7) Coalition (including the Office of School Readiness, Smart Start, Division of Child Development, and Frank Porter Graham Child Development Center).

The Education Cabinet also officially recognized the existing P-20+ working group as the project steering committee for the P-20+ SLDS. The P-20+ working group is currently developing a grant proposal to secure funding to establish the P-20+ SLDS that has all the elements listed in the America COMPETES Act and that achieves the objectives laid out in S.L. 2009-451, section 7.19.

The emerging vision includes enhancements to each sector's data management and analysis infrastructure, and the creation of a shared/common infrastructure. The systems design will allow for reliable linkage of student information over time within and across each sector of the education enterprise, using a common student identifier. The shared student identifier will be the unique ID currently being used by the Department of Public Instruction with their sector-specific longitudinal data system, CEDARS (Common Education Data Analysis and Reporting System). The Education Cabinet also assumed the role of providing high-level oversight and support for the P-20+ SLDS and charged the P-20+ working group to report to the Education Cabinet on progress and on any issues that require major policy coordination or for which consensus cannot be resolved to ensure the project moves forward to meet the timetable set forth by the competitive grant.

The P-20+ working group has applied for funding under two federal programs to support the effort to create a P-20+ data system. These sources of federal funding are as follows:

1. Applied for direct funding under \$250 million for State Longitudinal Data Systems, a competitive grant managed by Institute of Education Sciences.
2. Applied for funding as part of North Carolina's submission for \$400M under the U.S. Department of Education's \$4.3 billion in state incentive grants (the Race to the Top fund). To qualify for RttT funding, North Carolina must meet four assurances:
 - a. Internationally benchmarked standards and assessments.
 - b. Data systems and the effective use of these systems to inform decisions at the classroom, school, district, and state levels.
 - c. Effective teachers in all classrooms and effective principals in all schools.
 - d. Turning around the low performing schools to provide effective schooling for all students.

Timeline

This timeline for completion of the P-20 data system is taken from the December 2009 progress report of the North Carolina P-20+ working group progress report.

Table 3.1: Plan for Achieving Project Outcomes, Organized by Project Goal (Please refer back to Table 2.1 for Descriptions of 16 Measurable Outcomes)			
Goal 1: Institutionalizing Rigorous Governance			
Outcome	Subtasks	Start/Completion	Personnel/Sector
1.1	Convene NC P-20+ Steering Committee on a monthly to quarterly basis during and after the grant award to oversee the successful implementation of NC's first comprehensive P20+ SLDS.	July 2010—June 2013	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
1.2	Draft, review, and adopt MOU committing each sector to participation in NC P20+.	July 2010—Dec. 2010	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
1.3	Determine initial data set to be included in the NC P20+ data exchange.	Oct. 2010—Jan. 2011	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Determine modifications, as needed, to the NC P20+ data set.	Oct. 2010—June 2013	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
1.4	Determine and adopt data standards (e.g., SIFA, NEDM, PESC) for the NC P20+ data exchange.	Dec. 2010—June 2013	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
1.5	Gather and document requirements for the NC P20+ enterprise data dictionary.	Feb. 2011—Dec. 2011	NC P20+ PMO
	Determine best option and procure NC P20+ data dictionary solution.	Aug. 2011—Nov. 2011	NC P20+ PMO
	Implement a NC P20+ enterprise data dictionary.	Dec. 2011—June 2013	NC P20+ PMO
Goal 2: Implementing a Statewide P20+ Unique Student Identifier (UID)			
Outcome	Subtasks	Start/Completion	Personnel/Sector
2.1	Draft and formally adopt Statewide UID policy through the NC P20+ Steering Committee.	July 2010—Aug. 2010	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU

Table 3.1: Plan for Achieving Project Outcomes, Organized by Project Goal (Please refer back to Table 2.1 for Descriptions of 16 Measurable Outcomes)			
2.2	Demonstrate existing UID System capability, share technical specifications with all sectors, and conduct gap analysis to identify needs for each sector to effectively implement the UID.	July 2010—Sept. 2010	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Develop specific requirements for the Statewide UID system enhancements.	Sept. 2010—Oct. 2010	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Contract with UID software vendor to complete enhancements, as needed, to the Statewide UID system.	Oct. 2010—Nov. 2010	NC P20+ PMO, DPI
	Complete and implement enhancements to the Statewide UID system.	Nov 2010—Feb. 2010	NC P20+ PMO, DPI
2.3	Identify and implement data system changes needed to store the Statewide P20+ UID in each sector's student records.	Aug. 2010—Dec. 2010	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
2.3	Identify and implement sector data system modifications and/or acquisitions needed to integrate with the Statewide UID System.	Aug. 2010—June 2011	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
Goal 3: Building a Comprehensive P20+ Data Exchange.			
Outcome	Subtasks	Start/Completion	Personnel/Sector
3.1	Gather and document requirements for exchanging P20+ data across sectors.	Aug. 2010—Dec. 2010	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Determine and procure best option for NC P20+ data exchange mechanism, based on documented requirements.	Jan. 2011—June 2011	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Implement the NC P20+ data exchange mechanism.	July 2011—June 2012	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU

Table 3.1: Plan for Achieving Project Outcomes, Organized by Project Goal (Please refer back to Table 2.1 for Descriptions of 16 Measurable Outcomes)			
3.2	Gather/document requirements for each sector to comply with data standards (e.g., SIF and PESC) for data exchange, as specified by NC P20+ Steering Committee.	July 2011—June 2012	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Implement sector data system enhancements or acquisitions required for compliance with agreed upon data standards.	July 2012—June 2013	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
Goal 4: Ensuring High Quality Data in Each Sector and in the Exchange			
Outcome	Subtasks	Start/Completion	Personnel/Sector
4.1	Document requirements for source data system enhancements or acquisitions that will enable each sector to ensure quality of data collections.	Oct. 2010—April 2011	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Determine and procure best option(s), based on documented requirements, for source data system enhancements or acquisitions that will enable each sector to ensure quality of data collections.	May 2011—Jan. 2012	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Implement source data system enhancements or acquisitions that will enable each sector to ensure quality of data collections.	Feb. 2011—June 2013	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
4.2	Document data quality assurance policies and procedures for each sector and for the NC P20+ exchange.	Nov. 2010—June 2013	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
4.3	Determine and procure best option for auditing quality of initial NC P20+ data set.	Jan. 2011—June 2011	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
	Implement a data audit of each sector's institutional data to be included in the NC P20+ data exchange.	July 2011—June 2012	DPI, NCCCS, UNC, NCECDG, NCESC, NCICU

Table 3.1: Plan for Achieving Project Outcomes, Organized by Project Goal (Please refer back to Table 2.1 for Descriptions of 16 Measurable Outcomes)			
Goal 5: Building Capacity for Stakeholders to Access and Use Data			
Outcome	Subtasks	Start/Completion	Personnel/Sector
5.1	Gather requirements from Education Cabinet regarding priority indicators of State education system health.	July 2010—Dec. 2010	NC P20+ PMO, DPI, NCCCS, UNC, NCECDG, NCESC, NCICU
5.2	Document initial requirements regarding information products (ie, views, formats, level of interactivity) desired by the Education Cabinet, NC P20+ sectors, and other stakeholders (ie, General Assembly) for use in required reporting and data-driven decision-making.	Jan. 2011—June 2011	NC P20+ PMO
	Establish process to review periodically and modify as needed the documented initial requirements regarding information products (ie, views, formats, level of interactivity) desired by the Education Cabinet, NC P20+ sectors, and other stakeholders (ie, Legislature) for use in required reporting and data driven decision-making.	July 2011—Aug. 2011	NC P20+ PMO, All sectors (Project Steering Committee)
5.3	Establish plan that includes mechanisms, parties responsible, and timelines for producing information products (ie, views, formats, level of interactivity) desired by the Cabinet, NC P20+ sectors, and other stakeholders (ie, General Assembly) for use in required reporting and data-driven decision-making.	Sept. 2011—Dec. 2011	NC P20+ PMO, All sectors (Project Steering Committee)
	Produce information products (ie, views, formats, level of interactivity) desired by the Education Cabinet, NC P20+ sectors, and other stakeholders (ie, General Assembly) for use in required reporting and data-driven decision-making.	Jan. 2012—June 2013	NC P20+ PMO, All sectors (Project Steering Committee)

RELATED INNOVATIVE ACTIVITIES IN 2010

ITS/MCNC Collaboration

NC Senate Bill 202 outlines a plan of work for the state of North Carolina's Office of Information Technology Services (ITS) and the nonprofit North Carolina Research and Education Network, under the auspices of MCNC, to seek areas of efficiency and service enhancements for government and K-20 education customers.

ITS and MCNC have devised a plan of work focused on seeking efficiencies across several areas:

- Network operations and bandwidth procurement
- Data center services and cloud computing
- Security
- Identity management
- Video services

Under this legislation, ITS and MCNC must submit a plan of collaboration to the legislature by May 1, 2010.

Members of the e-Learning Commission's Subcommittee on Infrastructure and Subcommittee on Legislation, Policy, Funding, and Accountability have been advisers to the

ITS/MCNC process. Collaborative work between ITS and MCNC could speed the introduction of network-delivered shared service to K-20 education in North Carolina.

Race to the Top and the North Carolina Education Cloud

The American Reinvestment and Recovery Act made available to the U.S. Department of Education a competitive fund of \$4.5 billion for innovation in K-12 education. Grants from that fund, called Race to the Top (RttT), are awarded at the discretion of the U.S. Secretary of Education. North Carolina is submitting a comprehensive proposal that highlights both past and planned innovations across standards and assessments; teacher professional development; data gathering and data-based decision making; and turnaround of low-performing districts and schools.

North Carolina's RttT application will ask for funding for the NC Education Cloud. The NC Ed Cloud is the next step in the K-20 Connectivity Initiative, which established that the connection of public education entities through a common backbone could lead to a cost-saving strategy of shared services. The School Connectivity plan, drafted in 2007, identifies shared or cloud-delivered services as the stage of the connectivity initiative where increased value, efficiency, and cost savings of enhanced connectivity are realized.

The NC Education Cloud will begin with a cloud infrastructure for K-12 public education and serve as a pilot for a K-20 education cloud. The NC Ed Cloud will provide a highly reliable, cost-effective, server-based infrastructure supporting education statewide. It entails a migration from individual school district-hosted server infrastructure to cloud-hosted infrastructure. The primary objective of the NC Ed Cloud is to provide a world-class IT infrastructure as a foundational component of the NC educational enterprise. Moreover, the NC Ed Cloud will provide for:

- Reduced overall cost, with a significant savings once the transition to the Education Cloud is complete
- Decreased technical support staffing requirements at the LEA level
- Equity of access to computing and storage resources
- Equity of access for users to educational content, applications, and tools, including:
 - A common baseline of digital content and tools available to all teachers and students throughout the state
 - Statewide course and content management solutions tied directly to statewide data systems
 - A common repository, developed in partnership with the NC community college and university systems, of learning objects available to teachers and students, which will allow user-generated content to be stored and made available to appropriate audiences

- Statewide licensing of collaborative tools such as Web conferencing to enhance classroom collaboration and expand professional development opportunities for the education workforce, and
- Resources integrated into the NC eLearning portal, expanding the base of opportunities available to K-12 students.
- Efficient scaling according to aggregate NC usage requirements
- Consistently high availability, reliability, and performance
- A common infrastructure platform to support emerging data systems
- Ability to provide statewide access to core technology applications and resulting cost savings due to aggregation of digital resource licensing
- Improved security, and
- Sustainable and predictable operational cost.

North Carolina will develop the NC Education Cloud even without RttP funding. The NC Ed Cloud will be used to provide statewide access to major digital resources and tools. For example, it will provide one or more learning management systems to support both stand-alone online courses for students and educators, and the integration of online resources into traditional courses. It will provide Web 2.0 tools, such as blogs, wikis, and social-networking tools, in protected spaces appropriate for educational use by students and teachers. It will provide access to libraries of digital learning objects, for example, educational videos. It will also provide online spaces for students and teachers to post and share their work, from text to video, and to engage in collaborative work. A common set of online resources and tools will ensure that every student and teacher has equitable access to technology resources. A focused set of digital tools and resources used across the state will also facilitate technical assistance; professional development; and the sharing of resources across classrooms, schools, and districts.

Federated Identity Management

Federated identity management (FIM) provides a platform for cross-organizational use of computing services. Under FIM, if a high school and a community college are part of the same trust federation, a high school student can register for a course at a community college using her home high school credentials (such as user name, record number and access password). UNC GA and Internet2 both provide federation services.

Through its Collaborative Services Working Group (CSWG), MCNC is engaged with a multi-institutional pilot that will be completed and reported on in 2010. FIM is an example of a foundational technology that will increase in importance with the implementation of the NC Education Cloud.

For example, the implementation of FIM will have a significant impact on ease and security of access to a longitudinal data system. A properly integrated FIM platform will allow users to access the data system with the same credentials (user ID and password) that they use to

access other applications. FIM also will allow administrators of the longitudinal data system to define user access on a global scale, defining the levels of access granted to different classes of users only once.

The North Carolina Learning Object Repository

The North Carolina Learning Object Repository (NCLOR) provides educators across the state with a centralized asset that allows them to catalog, search, assess, share, and use digitized learning/teaching content. Development of this PreK-20 resource has been a joint collaboration by staff from the North Carolina Community College System, the University of North Carolina system, the North Carolina Virtual Public School, and North Carolina Independent Colleges and Universities. Ownership and administration of NCLOR lies with the North Carolina Community College System, which provides funding and administration through its 2+2 Initiative.

The NCLOR has been described as a "Lib-oratory," which encompasses characteristics of both a library and laboratory. Like a library, the NCLOR allows the user to catalog, search, and access a large body of learning content quickly and efficiently. Like a laboratory, the NCLOR provides teachers, instructors, and professors with a means to conduct independent and group research and share results and reports.

The NCLOR is designed to integrate digital learning/teaching content, online learning platforms (content delivery mechanisms), enable federated ID management (the concept of single sign-on to access all resources students and faculty have permissions to access), and all learning applications provided by any and all stakeholder institutions and systems. Thus the NCLOR is the centerpiece of eLearning resources in North Carolina.

The NCLOR is designed to be scalable and standards based. Scalability is required for statewide, PreK-20 coverage. Standards ensure protocol, process, quality, and compatibility of resources.

All work related to NCLOR Request for Proposal (RFP) development, vendor evaluation and selection, planning and implementation is in keeping with e-Learning Commission recommendations. To that end, the NCLOR vendor contract establishes:

- Ability for buy-in by all educational entities in North Carolina, public and private, including educational/training departments of state agencies.
- Ability for buy-in by different purchasing authorities via memorandum of agreement with the NCCCS.
- An aggregate FTE/enrollment licensing formula by which price per FTE/enrollment unit drops as total license totals increase.
- Economies of scale realized by hosting by the North Carolina Information Technology Services and related savings in hardware, IT support, and administration.

Active use of NCLOR in live online courses began in fall 2008.

APPENDIX A: E-LEARNING COMMISSION MEMBERS, 2009

Chairman of the eLC

Walter Dalton, Lieutenant Governor
State of North Carolina

Vice Chairman of the eLC

Tony Copeland
President/CEO, Longistics, Inc.

Members of the Commission

Peter Asmar
Chief Information Officer/
Associate State Superintendent
NC Department of Public Instruction

Wanda Barker
Distance Learning Instructional Designer
NC Community College System

Robert Brown
Dean, Division of Continual Learning
UNC-Greensboro

John W. Condrey
County Manager
Rutherford County, North Carolina

Lee Dedmon
Principal, Highland School of Technology
Gastonia, NC

Phil Emer
Director, Technology Planning and Policy
Friday Institute for Educational
Innovation

Cindy Fertenbaugh
Hewlett Packard
Cabarrus County Board of Education

Jerry Fralick
Chief Information Officer
State of North Carolina

Joe Freddoso
President and CEO
MCNC

Ann B. Goodnight
Director, Community Relations
SAS

Tony Habit
President
NC New Schools Project

Darlene Haught
Dean, Distance Learning Technologies
NC School of Science and Mathematics

Susan M. Johnson
CIO
Charlotte Mecklenburg Schools

Glenn Kleiman
Executive Director
Friday Institute for Educational
Innovation

John F. Leydon
Vice President for Information Resources
CIO
General Administration
University of North Carolina

Gerry Lipscomb
Managing Partner
IG Interactive

Alan Mabe
Vice President for Academic Planning
and University-School Programs
General Administration
University of North Carolina

Robert McMahan
Dean and Professor
Kimmel School
Western Carolina University

Bill McNeal
Executive Director
NC Association of School Administrators

Edgar Murphy
Durham, NC

Tom Miller
Professor and Vice Provost
DELTA (Distance Education and
Learning Technology Applications)
North Carolina State University

Mary U. Musacchia
Executive Director
Executive Team Advisors

Jane Pendry
College Liaison
Early Middle College Programs
Guilford Technical Community College

Steve Parrott
Embarq (retired)

Jane Patterson
Director, e-NC Authority
NC Rural Economic Development Center

Bill Randall
Associate Vice President
Learning Technology Systems
NC Community College System

Clayton Sessoms
Director, Division of Continuing Studies
East Carolina University

Melissa Thibault
Executive Director
LEARN NC

Saundra Williams
Vice President, Division of Administration
North Carolina Community College
System

Dorothy C. Yancy
President
Shaw University

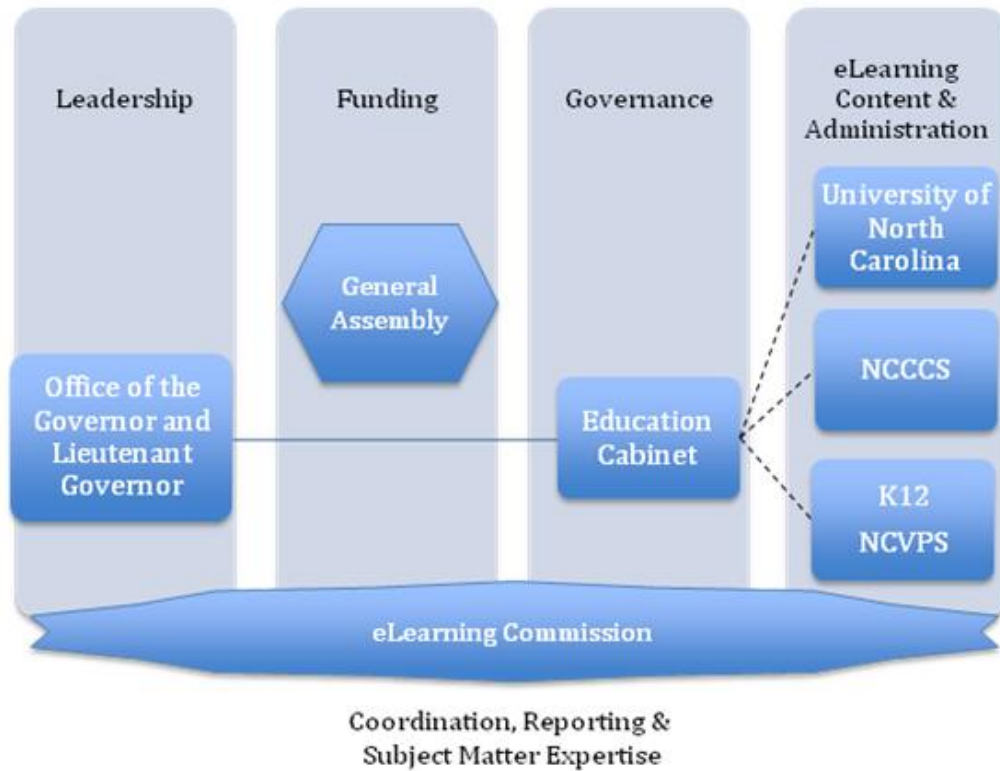
Bryan Setser
Director, NC Virtual Public School

Kay Zimmerman
Associate Vice Provost
Marketing and Partnership Development
NC State University

Governor's Liaison (Non-member)

Myra Best
Senior Advisor for Education and
Innovation to the Governor of NC

APPENDIX B: E-LEARNING GOVERNANCE AND WORKFLOW IN NORTH CAROLINA



APPENDIX C: PROGRESS TOWARD 2006 E-LEARNING COMMISSION RECOMMENDATIONS

These are the original fifteen recommendations made by the e-Learning Commission within the context of the current statutes that created the Education Cabinet. The Education Cabinet, chaired by the Governor, includes North Carolina's Secretary of Health and Human Services and the leaders of public and private education. The Education Cabinet delineates subjects of common interest across K-20 and coordinates. The attached organizational chart is intended to provide a visual context of the current relationships as defined by statute and does not change any of the authority for existing boards or Education Cabinet members. The recommendations do ask that the Education Cabinet be the place where the virtual learning for all citizens should be coordinated.

The Education Cabinet met on and endorsed the E-Learning Commission Report at its February 16, 2006, meeting.

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
1. The State Board of Education should name its virtual high school pilot approved by the General Assembly in June 2005 as the NCVirtual Public School. Its purpose should be to serve all public school students preK-12 and report to the State Board of Education. It is also recommended that in addition to its charge from the General Assembly for the implementation of a statewide virtual high school by June 2006 that a plan for expanding eLearning opportunities to middle and elementary students is developed no later than June, 2007.	State Board of Education approved on February 2, 2006: a. Naming the virtual pilot as the NCVirtual Public School b. Developing eLearning strategies for all public school students by June 2007.	State Board of Education	Completed

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>2. The General Assembly should move to establish a virtual learning entity called the NCVirtual for all North Carolina Citizens and locate it with the Education Cabinet. It is further recommended that an advisory body with support staff be established no later than July 1, 2006 to develop strategies for providing comprehensive eLearning opportunities for all North Carolina Citizens. The advisory board should be appointed by the Governor, the Speaker of the House of Representatives and the President Pro Tempore of the State Senate and the Chairmen of the boards represented on the Education Cabinet to ensure stakeholder representation on the advisory board. It is also recommended that the current e-Learning Commission continue to serve in the advisory capacity until the General Assembly convenes and can take action on this recommendation.</p> <p>It will be the responsibility of the NCVirtual advisory board to assist the Education Cabinet with the facilitation, coordination, and development of eLearning standards and opportunities for all NC citizens among the constituent groups they represent. Each constituent group represented on the Education Cabinet will retain all policy making authority while the Cabinet will ensure coordination and seamless access to all eLearning opportunities for all citizens. It is also recommended that the NCVirtual advisory board composed of the stakeholder groups work in collaboration with the Business Education Technology Alliance and report to the Education Cabinet and to Joint Education Oversight on its progress including any changes needed to policies, laws and rules to effectively develop eLearning opportunities for all NC Citizens no later than December 2006 and annually thereafter.</p>	<p>Education Cabinet endorses the recommendation for the General Assembly to establish NCVirtual with staff for all citizens under the Education Cabinet.</p> <p>Education Cabinet authorizes the current e-Learning Commission to continue to serve in the advisory capacity until the General Assembly convenes and can take action on this recommendation. (please refer to pages 17-19 in report for list of members)</p>	Governor/NC General Assembly/Education Cabinet	Completed –e-Learning Commission Established.

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>3. The General Assembly should establish local community centers statewide for public access, initially at the universities (public, private and independent), community colleges, public schools and public libraries - under the NCV logo.</p>	<p>Education Cabinet endorses General Assembly to establish local community centers statewide for public access.</p>	<p>Governor/NC General Assembly/Education Cabinet</p>	<p>No funding available as of 2009</p>
<p>4. The General Assembly should provide funding to the Education Cabinet to establish and maintain a common web portal for the programs in the NCV. The portal would provide information and primary access for the public. The NCV portal should:</p> <ul style="list-style-type: none"> a. Provide effective instructor, advisor, counselors & student orientation; training based on effective distance learning pedagogy in collaboration with North Carolina Schools of Education and other state; regional and national resources. b. Focus more on the non-traditional student; i.e., the "North Carolina Citizen Learner," an individual who seeks and acquires new knowledge and skills to lead a more productive life, thus ultimately benefiting North Carolina and the global community at large. c. Allow the learner to register a profile so that a customized view of the portal could be presented to him or her, and perhaps inform the registered learner about new opportunities of interest, matching the registered profile. d. Assure that all providers represented by the portal would have appropriate quality controls and accreditations in place, and are aligned with the needs of the North Carolina citizen 	<p>Education Cabinet endorses the recommendation for the General Assembly to provide funding to the Education Cabinet to establish and maintain a common web portal for the programs in the NCV.</p>	<p>Governor/NC General Assembly/Education Cabinet</p>	<p>Production site launched in November 2009 after 2008 pilot site.</p> <p>Personalization will be incorporated into the production site as funding becomes available.</p>

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>learner. Responsibility for quality control should remain the domain of the various eLearning providers and their respective accrediting bodies.</p> <p>e. Go beyond academic credit programs and include non-credit bearing eLearning opportunities that are in alignment with the needs of the NC citizen learner. E-learning also can be used to leverage resources across the state by providing on-line required training programs such as hazardous materials and safety training, school bus driver training, and others.</p>			

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>5. The Education Cabinet should review key policy issues that might further the success of this eLearning initiative including but not limited to:</p> <ul style="list-style-type: none"> a. Policies regarding clock hours to determine course credit b. University and Community College service areas c. Credit transfer policies among institutions d. Revenue sharing policies at individual public institutions e. Incentive policies for faculty to develop and offer e- learning courses f. Policies to encourage the free sharing of course content or learning objects g. Opportunities for technology transfer to facilitate business development h. Policies to ensure approved providers have equal access to state funds provided to the program <p>The NCV advisory board would make recommendations to the Education Cabinet as to how to best address these issues to best facilitate eLearning opportunities including any changes to policies, rules or laws that would require action by the individual boards of the constituent groups represented on the Education Cabinet and to the General Assembly.</p>	<p>Education endorses the recommendation for the Education Cabinet to review key policy issues that might further the success of the eLearning initiative.</p> <p>Note: The SBE is already doing this with the NCVirtual school pilot phase.</p>	Education Cabinet	Education cabinet began to meet again in 2009 after a several year hiatus. These issues will be included on the agenda in future years.

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
6. The Education Cabinet should leverage the resources being used by the constituent groups represented on the Education Cabinet and develop a common core of Professional Development resources that could serve all of these communities. The recent report to the Education Cabinet regarding the Professional Development Resource Center had many specific design recommendations that might be applicable. The initial programs to be included would include those of the public, private and independent universities; the community colleges; and public schools.	Education Cabinet endorses the recommendation that it develop a common core of Professional Development resources. Note: The Education Cabinet is currently addressing professional development and we ask that it address virtual learning as well.	Education Cabinet	Recommendations have been made for funding. Will be included in North Carolina's Race to the Top application.
7. The NCV Advisory Board should recommend to the Education Cabinet effective instructor, advisor, counselors & student orientation;, training based on effective distance learning pedagogy in collaboration with North Carolina Schools of Education; and other state, regional and national resources.	Education Cabinet endorses the recommendation as written.	Education Cabinet	In process

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>8. The NCV Advisory Board should recommend to the Education Cabinet a single set of digital content standards regarding PreK-20 online learning resources statewide. This set of standards must comply with those developed by the Southern Regional Education Board and shall include:</p> <ul style="list-style-type: none"> a. ADA compliance b. Security c. Privacy d. Identity Management e. Interoperability 	Education Cabinet endorses the recommendation that it should establish a single set of digital content standards regarding PreK-20 online learning resources statewide.	Education Cabinet	Using SREB standards as a guide. This recommendation needs constant monitoring as national standards are fluid.
9. The General Assembly (or NCV) should establish the NC Learning Object Repository (NCLOR) to support PreK-20 eLearning.	Education Cabinet endorses the recommendation as written.	Governor/NC General Assembly/Education Cabinet	In production phase with NCCCS institutions.
10. The Education Cabinet should develop e-portfolios for students beginning in high school or equivalent instruction in order to build a record of student accomplishments and achievements that can follow them throughout lifelong learning.	Education Cabinet endorses the recommendation as written.	Education Cabinet	Recommendation not passed by General Assembly

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
11. The Education Cabinet should establish database interoperability among institution and agency databases for seamless data transfer to support research and accountability requirements by creating minimum data requirements that include student achievement, human resources, facilities and financial data.	Education Cabinet to establish database interoperability among institution and agency databases.	Education Cabinet	In process – Working group has been established for three years and is now accountable to the Education Cabinet.
12. The Education Cabinet should identify and implement a common online learning platform (learning management system) statewide. This online learning platform must contain multimedia, collaboration tools and assessment tools. It must support interactive learning objects, and have tracking capabilities. It must accommodate age appropriateness and be easy to use by all, including developmentally and intellectually challenged users.	Education Cabinet endorses the recommendation as written.	Education Cabinet	Ongoing pilot-to-production Moodle environments at UNC, NCCCS, and LEAs. NCCCS Moodle and Blackboard interoperability now also in production phase.
13. The Education Cabinet should exercise economies of scale purchasing to reduce the cost per student in all instructional technologies. Including but not limited to the following: <ul style="list-style-type: none"> a. Negotiate single contracts for all instructional and distance learning technologies with licensing determined by an FTE/enrollment formula encompassing all educational systems. b. More flexible procurement, including multi-year contracts should be utilized to maximize cost effectiveness. 	Education Cabinet endorses the recommendation as written.	Education Cabinet	Existing examples with production environments of NCLOR and Moodle course management systems at 4 UNC institutions and 5 NCCCS institutions.

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>c. Invest in resources for appropriate “open source” learning technologies to eventually replace proprietary systems and avoid escalating costs.</p>			<p>Coordination between ITS and MCNC has been established to enable this.</p> <p>MCNC Collaborative Services Working Group (CSWG) is the coordination body for innovation in core, content and collaborative technologies across K-20. Relationship with e-Learning Commission between CSWG and e-Learning Commission was made in 2009.</p>
<p>14. The Education Cabinet should develop a balanced scorecard or incorporate into the annual NC State Report Card measures for effectiveness and success of statewide online learning initiatives.</p>	<p>Education Cabinet endorses the recommendation as written.</p>	<p>Education Cabinet</p>	

RECOMMENDATION	SUMMARY OF ACTION	RESPONSIBLE ENTITY	RESULTS OCT 2009
<p>15. The NCV advisory board should study appropriate means for financing the necessary infrastructure needed such as a statewide bond issue; consulting with the Utilities Commission on opportunities for service fees or surcharges, tax credits; and leveraging other funding sources. The NCV advisory board should make recommendations to the Education Cabinet and to the General Assembly based on the results of its study that may include better utilization of existing resources and/or new funding sources. The study should include but not limited to:</p> <ol style="list-style-type: none"> Extending the broadband data infrastructure to every school, community college, college, university by the state. Providing affordable broadband in homes and workplaces in NC. 	<p>Education Cabinet endorses the recommendation as written.</p>	<p>Governor/General Assembly/Education Cabinet</p>	<p>K20 Connectivity Initiative currently has placed:</p> <ul style="list-style-type: none"> All of the UNC system All of the 115 K12 LEAs 24 of 36 Independent Colleges and Universities 20 of 58 North Carolina Community Colleges on the NCREN backbone <p>MCNC Broadband Recovery Proposal and other Recovery proposals will assist with rural broadband deployment.</p>

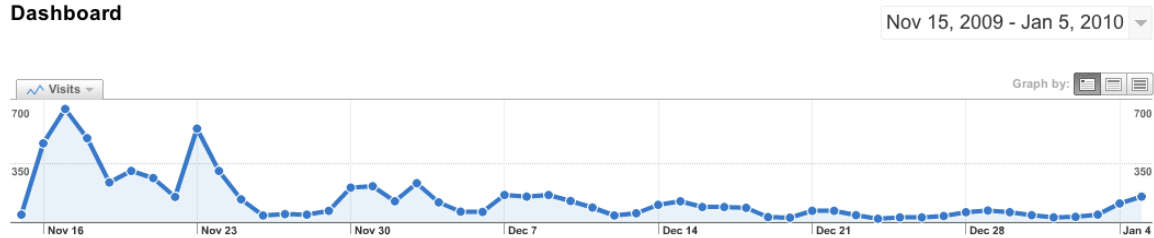
APPENDIX D: METRICS SUMMARY REPORT

eLearningNC.gov

November 15, 2009 to January 5, 2010

Data accuracy: This report is derived from Google Analytics (GA). Because GA is a third-party, java script-based tool, each number represented is roughly 90-95% of actual traffic totals. These numbers are pulled directly from the tool and have **not** been scaled up to match known limitation.

Dashboard



Step 1: Recruit

From November 15th 2009 until January 5th, 2010 **5,831** people came to eLearningNC.gov **7,154** times and viewed **61,209** pages.

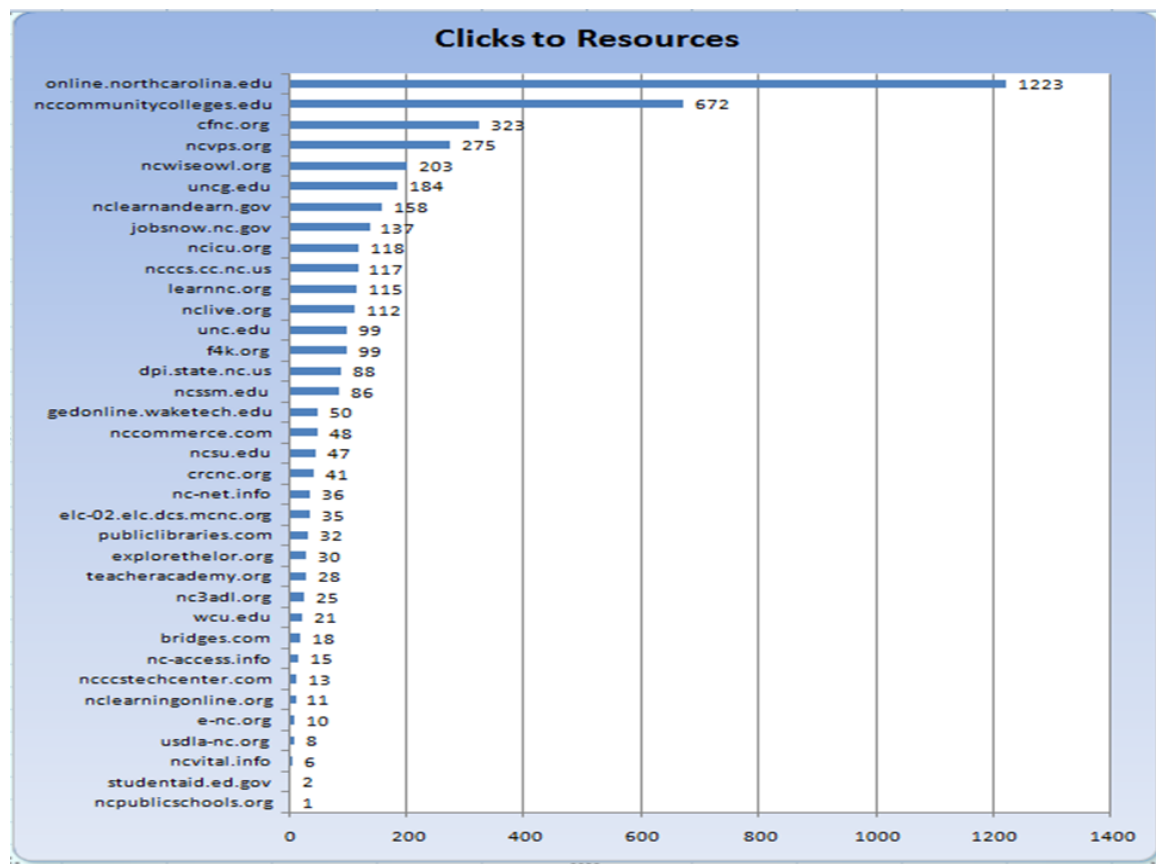
Visitors: 5,831

Visits: 7,154

Page views: 61,209

Step 2: Redirect

Below you will find the total number of clicks from eLearningNC.gov to resources by top level domain. If a given domain had five resources and each was clicked ten times, this report will show that domain with fifty clicks.



Rate of Success:

From 7,154 visits, eLearningNC.gov sent a user through to a resource 4,515 times.

Gross conversion rate: 63%* (some users are responsible for multiple conversions)