New Mexico Distance Learning Strategic Plan (2000-2009)

A Bridge to eLearning Opportunities in New Mexico

A plan to improve educational opportunities for learners served by K-12, higher education and state agencies in New Mexico

August 12, 2007
The most dangerous experiment we can conduct with our children is to keep schooling the same at a time when every other aspect of our society is dramatically changing.

Chris Dede

In times of change, learners inherit the Earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.

Eric Hoffer

Sixty years ago I knew everything; now I know nothing; education is a progressive discovery of our own ignorance.

Will Durant

| eLearning – Term used extensively in this report. eLearning encompasses several related terms including distance education, distance learning, online learning, web-based courses, ITV-courses, virtual learning, etc. eLearning refers to learning opportunities where the learner and instructor are not physically in the same location and may be interacting asynchronously or synchronously online. eLearning typically helps reduce both geographic and schedule barriers for the learner. |

On the cover: The Millau bridge over the River Tarn in the Massif Central mountains of France. The structure is more than 300m (984ft) high - taller even than the Eiffel Tower.
http://news.bbc.co.uk/2/hi/europe/4091813.stm

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New Mexico eLearning Plan (2000-2009)
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The purpose of this plan is to present the steps needed to establish sustainable eLearning opportunities in New Mexico for students and workforces served by K-12, higher education, and state agencies. eLearning is critical to the success of individuals, organizations, communities, and economies in the knowledge economy (Ruttenbur, Spickler, & Sebastian, 2000). Developing quality eLearning support statewide is imperative to the economic future of New Mexico.

Where we are now with eLearning: This plan presents an overview of trends nationally and internationally in eLearning and a brief history of statewide eLearning initiatives in New Mexico. Understanding national trends, state history, and current statewide eLearning plans will be useful for improving educational practices in New Mexico.

Where we want to go: Significant statewide planning events during 2006 and the associated state-level support in the 2007 legislature provided the basis for the current direction of eLearning through FY 2009 as outlined in the current plan. Another planning cycle in 2008-09 will further map out long-term strategic directions.

How will we get there: The New Mexico Learning Network (NMLN) is playing a key role in the current planning by working with statewide stakeholders, the NM Public Education Department (NMPED), and the NM Higher Education Department (NMHED) on the implementation of recently funded initiatives including Governor Bill Richardson’s Innovative Digital Education And Learning (IDEAL-NM) initiative and the statewide Cyber Academy initiative outlined in the Cyber Academy Act (NM_Governor, 2006; NM_Legislature, 2007). The three major goals of these initiatives are:

- **Implementation of a statewide eLearning delivery system** for K-12, higher education, and state agencies. This includes statewide software licensing for a learning management system and web conferencing system. Also included are consolidated data center operations for these systems.

- **Creation of a state-led virtual school (Cyber Academy)** in partnership with local schools, districts, and Rural Education Cooperatives (RECs) throughout the state.

- **Creation of a statewide eLearning Service Center** for K-12, Higher Education, & Government, to support the use of the shared eLearning delivery system and the administration of the NM Cyber Academy.

- **Long-term Planning** will be conducted during 2008-09 to address the rapidly changing nature of eLearning methods, technology, and stakeholders. That process will involve all key stakeholder groups to create a plan to support education reforms. The plan will span the 2009-2012 timeframe and allow the NM eLearning Plan to be updated approximately every three to four years.

By taking a recurring approach to eLearning planning, New Mexico will ensure relevant and sustainable opportunities for its citizens.
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New Mexico eLearning Plan (2000-2009)
Purpose and Introduction

The purpose of this plan is to present the steps needed to establish sustainable eLearning opportunities in New Mexico for students and workforces served by K-12, higher education, and state agencies. eLearning is critical to the success of individuals, organizations, communities, and economies in the knowledge economy (Ruttenbur et al., 2000). Developing quality eLearning support statewide is imperative for the economic future of New Mexico.

This plan presents an overview of trends nationally and internationally in eLearning and a brief history of statewide eLearning initiatives in New Mexico. Significant statewide planning events were facilitated by the New Mexico Learning Network during 2006, resulting in the current plan that maps out a path through FY 2009; however, given the rapidly changing nature of eLearning methods, technology, and stakeholders, it is recommended that a statewide strategic planning process be conducted during 2008-09 that involves all key stakeholder groups to develop a plan spanning the 2009-2012 timeframe. This collaborative planning process will allow the NM eLearning Plan to be updated approximately every three to four years. This recurring approach to planning will help ensure relevant and sustainable opportunities for New Mexico citizens.

The evidence is clear that eLearning continues to increase nationally, both in the numbers of students served and as a strategy receiving state-level support and interest. (Allen & Seaman, 2006; Watson, 2006). The growing level of support and interest in eLearning can logically be tied to the demands of a knowledge based economy. The digital age has created an overwhelming mass of raw information that is frequently difficult to retrieve and use. An argument can be made that the critical and distinguishing strength of countries (states), organizations, and individuals lies in their intelligence and knowledge in the new economy. Network technology has enabled a proliferation of customized and timely educational tools and optimizes investment in human capital: eLearning solutions facilitate the delivery of the right information and skills to the right people at the right time (Ruttenbur et al., 2000).

It can be argued that without state level leadership, New Mexico will miss out on many beneficial eLearning synergies, as local educational institutions attempt to optimize eLearning within a confined geographic region and typically without sufficient resources to deploy advanced eLearning tools and techniques needed to serve learners. The absence of shared eLearning delivery technologies and methods inhibit collaboration in K-12, higher education, and state agencies to achieving sustainable eLearning services as the number of learners to be served continues to expand.

Prior to the 2007 Legislative Session in New Mexico, education leaders from across the state came together to create a solid eLearning plan that resulted in funded educational initiatives that will support the long term goals of eLearning in New Mexico.
Long term goals of eLearning in New Mexico

- Develop a more skilled workforce to support New Mexico economic development
- Minimize barriers of location (distance) and schedule (time) to accessing educational opportunities
- Create a collaborative, scaleable, and cost-effective eLearning system for K-12, higher education, state agencies, and workforce development
- Provide highly qualified eTeachers (both in subject and eLearning methods) and expanded course choices for rural (and urban) schools
- Increase just-in-time workforce development opportunities while minimizing travel costs
- Build capacity and skill for eLearning in NM using national best practices

To better understand the current plan, it is important for the reader to be aware that within this rapidly evolving area of education, some confusion exists about terminology. For the purpose of this report, the term eLearning will encompass other related terms including distance education, distance learning, online learning, web-based courses, ITV-courses, and virtual learning, among others. Also, eLearning typically refers to learning opportunities where the learner and the instructor are not physically in the same place (i.e. minimal or no face-to-face meetings).

eLearning can reduce barriers related to both location (distance) and schedule (time). Table 1 below illustrates how the different course styles can overcome the barriers of location and scheduling. Be aware that Table 1 is not addressing the quality of instruction, but rather the barriers to access experienced by the learner. Quality teaching and learning can be present or absent when utilizing any of the formats listed in the Table 1.

Effectively removing time and distance barriers will require well-designed “quality” eLearning courses, which require non-trivial development costs and/or curriculum materials purchases. These costs can be absorbed as the number of students being served by eLearning increases, and as the courses are designed to be more textbook independent, when possible. Textbook costs are shouldered by the institution (K-12), or learner (higher education), but the cost of high quality digital resources can be reduced when utilized by a broad base of individuals statewide. Vendors often present good short term or targeted solutions by providing “ready made” solutions. However, these solutions are not typically financially scalable given a growing base of students, and do not provide any flexibility for state-level content or format changes. Scalability and sustainability are important issues given the projected growth rates for eLearning courses that will involve the financial, technical, and support aspects of proposed solutions.

To achieve affordable and effective eLearning solutions on a statewide basis, coordination among educational institutions will be increasingly important. Schools need to be able to provide students local instructional supervisors and internet computer access in coordination with the at-a-distance subject matter experts (eTeachers). This type of consistent approach to eLearning support will remain a key educational strategy in maintaining quality and support to the learners statewide. While certain categories of learners may have independent computer access and may be well served by self paced eLearning courses, a greater number of learners (especially in K-12) will require a more facilitated, structured, and coordinated approach to eLearning support. The current plan for New Mexico will focus on strategies to minimize the barriers of location and schedule in a coordinated fashion across the state to provide access to
these opportunities for all New Mexico citizens while making the most efficient use of limited eLearning resources.

**Table 1 – How Various Course/Workshop Formats Address Barriers of Location & Schedule**

LOW barriers provide greater access to educational opportunities.

<table>
<thead>
<tr>
<th>Type of Course</th>
<th>Type of Technology Used</th>
<th>Barrier: Location</th>
<th>Barrier: Schedule</th>
<th>Description of Instructional Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional or Web enhanced Course (Synchronous)</td>
<td>Classroom + Web</td>
<td>HIGH Barrier</td>
<td>HIGH Barrier</td>
<td>Student must attend all class sessions conducted in a physical classroom, face to face (f2f) with subject expert. The course may be enhanced with web-based content or tools (e.g. learning management system).</td>
</tr>
<tr>
<td>Blended/ Hybrid Course (Synch/Async)</td>
<td>Web + Classroom</td>
<td>MED Barrier</td>
<td>MED Barrier</td>
<td>Student is required to attend numerous f2f class sessions; however, typically 30% or more of f2f class sessions are replaced with online sessions that may be synchronous or asynchronous. The class session is typically at a central campus, school, or training center. Sometimes called “flex learning”, this is a rapidly growing format nationally, and places demands on eLearning infrastructure.</td>
</tr>
<tr>
<td>ITV (Video Conference) (Synchronous)</td>
<td>ITV Interactive TV</td>
<td>LOW Barrier</td>
<td>HIGH Barrier</td>
<td>Student is required to attend classes at a designated video conferencing room on specific dates/times to interact with subject expert and other students. These rooms are typically scheduled by each local school, college, university, or agency. While distance barrier is reduced, the instruction is still not designed to be accessed at home or any other generic internet connected location.</td>
</tr>
<tr>
<td>Online Course (Web-based Synchronous)</td>
<td>Web</td>
<td>LOW Barrier</td>
<td>MED Barrier</td>
<td>Student is required to access internet at specific dates/times to interact with subject expert and other students. Web conferencing or text chat tools are typically used. Students can generally participate from any physical location where they can obtain an internet connection. Ability to access courses from any internet location has “some” minimization to schedule barrier due to travel time.</td>
</tr>
<tr>
<td>Online Course (Web-based Asynchronous) (Instructor Led)</td>
<td>Web</td>
<td>LOW Barrier</td>
<td>LOW Barrier</td>
<td>On a weekly basis (typical timeframe), student works with classmates and subject expert together toward learning objectives. Web tools used include email, group discussion boards, and video-on-demand services. There may be a local instructional supervisor (e.g. teacher without subject expertise, parent, teaching assistant) working in partnership with subject expert.</td>
</tr>
<tr>
<td>Online Course (Web-based Asynchronous) (Self paced)</td>
<td>Web</td>
<td>LOW Barrier</td>
<td>LOW Barrier</td>
<td>Student interacts with course at their own pace. Typically very little (if any) interaction with other students in course or subject expert. There may (or may not) be a local instructional supervisor to monitor progress and provide guidance. NOTE: These “any pace” courses are typically cheaper per student and are normally best suited to students who can master course content without facilitation of subject matter expert; however, these courses are not necessarily appropriate for other students.</td>
</tr>
</tbody>
</table>

New Mexico eLearning Plan (2000-2009)
National & International Landscape for eLearning

This section provides a number of excerpts from national and international studies, articles, and reports citing several eLearning trends including:

- Growing demand for eLearning in K-12, higher ed., state agencies, and industry
- Increasing links between eLearning and economic development / 21st Century Skills
- Expansion of state-level and consortia eLearning support in U.S.
- Maturing examples of established state-level programs in U.S.
- Expanding international trend of governmental and consortia support for eLearning

United States Trends in eLearning

With the explosion in demand for eLearning solutions, many states have initiated state supported eLearning initiatives, such as virtual college/university clearinghouses, virtual schools (K-12), and online training and professional development. Many states have been investing consistently to improve their eLearning infrastructure and practice since the late 1990s. These supported initiatives have often evolved separately focused on higher education or K-12, but a number of states are now increasingly seeking ways to consolidate and coordinate the resources and skills needed by the various publicly funded eLearning initiatives. Besides resource sharing, there are other statewide issues that eLearning collaboration can help address. This includes dual credit, workforce development, adult education, articulation, and inter-institutional programs. The U.S. Distance Learning Association (USDLA) reports that eLearning is used in all areas of education, including K-12, higher education, home school education, continuing education, corporate training, military and government training, and telemedicine. USDLA also notes that research studies have consistently found that eLearning programs report learning effectiveness similar to traditional instruction methods, and that student attitudes about eLearning are positive (USDLA, 2007).

Higher Education – Longer Trends with eLearning

On November 9, 2006, the Sloan Consortium issued its fourth annual survey results report on the extent of online learning in American colleges and universities (Allen & Seaman, 2006). The evidence reported was that there has been no leveling of the growth rate of online enrollments. Institutions of higher education report record online enrollment growth on both a numeric and a percentage basis. Nearly 3.2 million students were taking at least one online course during the fall 2005 term, a substantial increase over the 2.3 million reported the previous year. The more than 800,000 additional online students is more than twice the number added in any previous year. An online course is one where “80 percent of the course is delivered online.” Online learning was reported as becoming a “critical” part of the chief academic officer’s long-term
planning strategies. This is especially true for those in public colleges and universities where student access to education is a critical part of their mission (Allen & Seaman, 2006).

Across the country, online learning and virtual college and university consortia have become a common step in the advancement of education systems. In a national “State of Learning” report produced by the National Governors Association (NGA), it was reported that of the 39 states responding to a survey regarding eLearning, almost two thirds at that time had a virtual university or virtual community college system to deliver eLearning (NGA, 2001). According to a more recent national study called Virtual College & University Consortia (VCU), as of 2003, only five states and the District of Columbia did not appear to have a system or state-level virtual college and university: Alaska, Delaware, New Hampshire, New Mexico, and Vermont (Epper & Garn, 2003). According to the 2003 study, the more highly funded and more centralized a VCU was, the greater the impact on policy change a VCU was likely to report. The majority (63%) of state Virtual College and University Consortia (VCUs) are expected to play a role in policy change related to eLearning. VCUs believe their greatest impact on policy change has been in supporting inter-institutional collaboration. Centralized VCUs reported greater impact in the areas of tuition policy, duplication, articulation, and transfer than decentralized VCUs (Epper & Garn, 2003). While there have been some ups and downs in the VCU trend and some bad individual examples, the general national trend appears to be strengthening support for VCUs.

In the fall of 2004, the Southern Regional Education Board (SREB), a 16 state educational technology cooperative, distributed a report for the first time detailing information about the status of state virtual schools in SREB states. Related to the release of this report, in March 2005 the Cooperative convened SREB states to address key virtual learning policy, instructional, and management issues (SREB, 2005). This activity and the attention by groups like the National Governors Association highlights the growing interest eLearning is receiving at state, multi-state consortia, and national level.

**K-12 and Higher Education – Trends towards collaboration**

A national 2007 study of school districts (Picciano & Seaman, 2007) notes that the growth pattern in K-12 for eLearning mimics the experiences in higher education which became more involved in online learning a good five to six years before K–12 schools. If this pattern continues in K–12 over the next five or six years, the enrollment in online courses would easily approach several million students. The U.S. Department of Education has been enthusiastic in its support regarding online learning, and the National Education Technology Plan (2004) estimates that within the next ten years that every state and most schools will offer eLearning courses to their students. The major barriers and issues for eLearning in K-12 as reported by district administrators include; 1) Concerns about course quality; 2) Cost of course development and/or purchase; 3) Concerns about receiving appropriate funding for students taking eLearning.
courses; 4) Need for teacher training. The study notes that major eLearning solution partners that need to help address these issues are state-led virtual schools, higher education institutions, vendor partners, and of course the districts themselves.

In 2006, Pennsylvania State University hosted the Sloan K–12 Higher Education Collaboration in Online Learning, a meeting that was held at the Corporation for Public Broadcasting in Washington, DC. Thirty-five individuals discussed issues related to collaboration in online learning between K–12 schools, colleges, and universities. All invited individuals had experience or expertise in online learning and represented a wide spectrum of K–12 schools, colleges, and online learning providers. The rich potential for collaboration was discussed; however, it was also recognized that more work and more data was needed to help support these possibilities (Watson, 2006). There is evidence that states are increasing their support to develop eLearning as a useful tool to help facilitate solutions to alignment issues between K-12, higher education, and workforce development (Epper & Garn, 2003).

Online learning through virtual schools is one of the most important advancements in rethinking the effectiveness of education in the United States. The virtual school provides access to online, collaborative, and self-paced learning environments that can facilitate 21st Century skills. Today’s students must be able to combine these skills with the effective use of technology to succeed in current and future jobs (NACOL, 2006).

Data from a 1999 survey of state directors of adult basic education reveals that 31 states include distance learning as either a current initiative, or in a future plan, to provide education delivery to adult learners. Distance learning for adult learners is shown to be as effective as traditional classroom instruction when methods are appropriate to course objectives, and interaction among students is built into the program (Parke, 2000). While the survey information is dated, it should be expected that eLearning solutions for adult basic education has not become less important.

Government employees are also a key group that can benefit from eLearning. As large employers, federal and state governments spend a great deal on educating and training their ranks every year. Although only a small portion of education and training is currently being delivered online, eLearning is a solution that certain areas of government are turning to with greater urgency. The Department of Defense, for example, has to provide critical training for
forces around the globe and has been one of the earliest government adopters of technology-based learning. Their Advanced Distributed Learning initiative has many strategies that can be applied to other divisions of government (Defense Dept., 2007).

The workforce in any state represents a tremendous resource of life long learners. Over $62.5 billion dollars was budgeted for formal training by U.S. corporations in 1999 and that number is expected to be much greater in 2007 (Ruttenbur et al., 2000). These companies understand that training and retraining is of critical importance to their economic health. Given the increasing frequency that knowledge and skill sets for many jobs change, developing effective eLearning to support retraining efforts is of critical importance to business. Students and employees in New Mexico need to become fluent lifelong learners adept at obtaining knowledge via the process of eLearning. eLearning is not simply a new way to carry out the same old education and training activities that have driven the learning process for centuries, but rather is a fundamentally more efficient and effective way to organize and deliver knowledge resources to individuals and organizations competing in the knowledge economy.

Currently, New Mexico is presented with the opportunity to establish at the ground level a unique model of eLearning collaboration and resource sharing between higher education, K-12, and state agencies. This type of multi-sector collaboration and resource sharing could become a national model if properly implemented and sustained.

**Examples of Mature eLearning Programs in Other States**

Other states have varying focuses for their eLearning initiatives and are at different stages of program development. Examples of mature eLearning programs include Kentucky, Florida, and Ohio. Additional information is provided in Appendix A.

- Kentucky Virtual Campus (KVC), started in 1997, includes K-12, higher education, Adult Basic Education, government training, and several other eLearning initiatives. While Kentucky has some common branding across initiatives, the state is struggling with building bridges to its different initiatives which grew somewhat separately. New Mexico has the opportunity to “get it right” before silos become reinforced and difficult to manage.
Florida Virtual School (FLVS), founded in 1997, this state-funded K12 public school is often reported as one of the most successful state funded eLearning initiatives. FLVS now has over 80,000 student course completions (.5 credit), estimates over 46,000 students served, and employs over 150 full-time and part-time teachers.

Ohio Learning Network (OLN), started in 1999, is Ohio's premiere eLearning site that aggregates services and resources so Ohioans can meet their learning potential while assisting in Ohio’s economic growth and ensuring that Ohio colleges and universities can continue to be knowledge leaders. OLN helps Ohioans find educational programs that meet their needs, works with colleges and universities using technology to improve teaching and learning, and helps build partnerships among higher education, schools, businesses, and communities.

These examples present the wide range of services that can be provided with sustained state-level support for eLearning. The reader should keep in mind that the examples given were developed through sustained investment of resources over many years (typically 6 to 10 years). New Mexico only began allocating significant recurring funding to establish sustained eLearning support beginning in Fiscal Year 2007.

**International Trends of eLearning**

In her analysis of eLearning internationally, Andrea Edmundson noted that the most developed, progressive, and economically stable countries in the world are those that are technologically advanced (Edmundson, 2007). Technological change and the building of human capabilities are interrelated: each requires the development of the other for success and the rethinking of educational systems to meet the new challenges of technology. Using eLearning is one way in which to increase access to technology education, subsequently introducing new technologies and improving technological literacy. Also in the realm of eLearning, Western countries such as the United States, Canada, and Western Europe are the largest producers of eLearning, but the fastest growing consumer groups are in Eastern countries such as Japan, China, and India. This situation challenges those who support the use of eLearning for socio-economic development to provide courses that are culturally accessible (Edmundson, 2007). Globally, the figures are also eye-opening. Between 1999 and 2003 the percentage of people worldwide that was able to go online increased from 4.5 percent to 11 percent (Hesseldahl, 2005). The trend has implications for those countries, states, and individuals that have highly developed competencies with eLearning.

Providers of eLearning tools and services also see the expansion of eLearning. The global eLearning market is projected to surpass $52.6 billion by 2010. Already the 2007 U.S. eLearning market is $17.5 billion according to "eLearning: A Global Strategic Business Report," a new report recently published by Global Industry Analysts. While Europe and Japan lag on eLearning adoption compared to the United States (U.S. enterprise eLearning adoption accounts for 60 percent of the market, while Europe's accounts for 15 percent), overall usage of eLearning in Asia is expected to reach a compound annual growth rate of 25 percent to 30 percent through
2010, according to the firm. Worldwide that rate should hit between 15 percent and 30 percent, the report states (Kopf, 2007).

**China**

The role of eLearning in China as a means of promoting a knowledge-based society is increasingly being established though over 68 special eLearning university web institutes that issue degrees such as B.A., M.A., Ph.D. degrees. These university institutes are funded by the government (Ministry of Education) with over $250M (USD) invested and 1.9 million students enrolled. While this seems like a lot of students, this figure represents only 10% of postsecondary students in China, and the growth rate in eLearning enrollment and expansion of the curriculum is expected to continue to grow rapidly (Gilsun, 2006).

The evolution of eLearning in China has seen three generations: (1) Correspondence-based education; (2) Broadcast/TV-based education since 1980's, an educational program known worldwide; (3) Advanced (Networked) eLearning based on information and Internet technologies evolved since 1990's.

The CERNET website defines networked schooling (education) as a virtual school featuring autonomous learning with the focus on the student learning rather than the school, an emerging kind of fence-free school. Different from traditional broadcast/TV-carried education, it enables interactive teaching and learning at any time and place in a network environment, providing an easy yet efficient access to education resources and can improve the educational quality. In industrial age, education featured students-to-classes; in the information age, it features classes-to-students. With the evolution of advanced distance learning, educational concepts, contents, modes and structures will change significantly. Developing distance learning may provide more people with diversified educational opportunities, efficiently leverage legacy educational resources, implement sound resource allocation and improve the quality of science and culture in the nation, accommodating the real demands of social economic and cultural development in China (Ji'an, 2001). To support the growth of eLearning, the "China Educational Research Network (CERNET) High-speed Backbone Project" completed CERNET1, in 2000, then CERNET2 in 2004. CERNET2 is the largest next-generation Internet backbone and the core network of the China Next Generation Internet (CNGI) demonstration project. CERNET is the only nationwide academic network; so far it is also the world's largest native IPv6 backbone (CERNET, 2006).

**Mexico**

Tecnológico de Monterrey, which has campuses distributed throughout Mexico, academic centers in other Latin American countries, international offices in North America, Europe, and Asia. A prominent educational institution in Mexico, Tecnológico de Monterrey uses eLearning heavily. Through its Virtual University it is delivers educational programs all over the world, by means of learning networks and advanced information technologies. These include a learning management system, web conferencing, and videoconferencing, among others. For more information on these learning networks, go to http://cmportal.itesm.mx/wps/portal.

An interesting application of eLearning for training government employees was developed by the Mexican Ministry of Public Administration, and Canadian eLearning experts working to develop New Mexico eLearning Plan (2000-2009)
“@Campus Mexico”, an eLearning portal as part of a strategy by the Mexican government to recruit, retain, and promote employees based on merit and equity. It is designed to provide public servants with the tools and systems they need to continually improve the way they serve Mexican citizens (Guénette, 2004). For more details on this service go to http://www.campusmexico.gob.mx/sse_generico.

**Europe**

Responding to the growth of eLearning, countries throughout Europe have implemented eLearning initiatives and support structures at country and province/state levels; however there is also a number of multi-country associations dedicated to similar purposes. Just two of the many, many associations are presented below.

EDEN, the European Distance and ELearning Network is an international educational association open to institutions and individuals dealing with eLearning, open and distance education. Proving versatile expertise, the association embraces all levels of formal and non-formal education and training. The intent is to foster development and collaboration in the constantly evolving field of eLearning, by shaping European policy and offering services in a non-hierarchical manner. For more details on this service go to http://www.eden-online.org/eden.php.

EIfEL (European Institute for ELearning) is a European professional association whose mission is to support organizations, communities and individuals in building a knowledge economy and a learning society through innovative and reflective practice, continuing professional development and the use of knowledge, information and learning technologies. EIfEL is leading the Europortfolio consortium and is a founding member of EFQUEL, the European Foundation for Quality in ELearning. For more details on this service go to http://eife-l.org/eifel.

**Africa**

In discussion about the future of Africa, stakeholders in economic development recognize the need for culturally appropriate eLearning (Edmundson, 2007). For example, a major theme at the 1st International Conference on Information Communication Technologies (ICT) for Development, Education, and Training (24–26 May, 2006) was *Localization, customization and content development*:

In order that eLearning has real impact in Africa, support is required to build an indigenous and sustainable educational content industry which takes into account the need for materials and services which respect Africa’s rich cultural and linguistic history. With over 2,000 languages, which represents a third of all the languages worldwide, Africa cannot afford to ignore the issue of language and culture in the development and building of an Information Society. Appropriate instructional design practices, including open source approaches and open access content management strategies, will be demonstrated and discussed as well as good practice in appropriate localization and customization of imported content.
Additional Sources of Information

Excerpts from key studies, articles, and reports provide the reader an overview of U.S. and international trends. Additional information can be obtained from the following locations.

- National Alliance of Statewide/Regional Virtual Learning Colleges
  http://www.itcnetwork.org/NationalAlliance.htm

- North American Council for Online Learning
  http://www.nacol.org

- SREB Electronic Campus Initiatives
  http://www.ecinitiatives.org

- United States Distance Learning Association
  http://www.usdla.org

- China Education and Research Network
  http://www.edu.cn/english_1369/index.shtml

Status of eLearning in New Mexico

Overview

The New Mexico educational system is structurally disparate. Educational initiatives are often funded separately, encouraging school districts, higher education institutions, and state agencies to operate in silos and compete for funding. There are certainly valid needs of individual institutions, schools, and agencies such as on-campus computers, local area networking, or buildings. However, some of the resources required for eLearning are well suited for cooperative state-level sharing and funding. These resources include shared application software, online course content, eTeachers, collaborative delivered degree programs, network connectivity, etc.

Since 2000, there have been two notable “statewide” eLearning initiatives in New Mexico targeting the delivery of “for credit” eLearning courses. The first was the New Mexico Virtual College (2000), followed by the New Mexico Virtual School (2001). A brief history of these initiatives is included below.

While valuable lessons have been learned, neither statewide initiative achieved a sustained, wide-scale impact for the State of New Mexico due to inadequate support, including a lack of sustained funding, non-scalable models, and inadequate support. Successful large scale initiatives in other states have had ongoing support over five to ten year periods that have included recurring funding, scalable models, and a critical mass of influential champions. Other state initiatives that lacked state level leadership and coordination and have seen problems with small scale, expensive non-scalable models, questionable quality, inefficient use of state funding, and anti-collaborative funding models.
It should be noted that there have been some statewide eLearning support programs that were not directly charged with delivery of online courses, or more localized in nature that have produced some sustained services. These include Regional Educational Technology Assistance (RETA) and efforts by Regional Educational Cooperatives (RECs). It should also be noted that New Mexico colleges, universities, and school districts have continued to improve their local individual eLearning practices over time with some positive inter-district and inter-institutional collaborations. However, the wide-scale synergies apparent in other states have not yet been achieved. The needed collaboration will help provide consistent solutions for New Mexico learners that currently look out of state for eLearning opportunities as well as attract new learners to New Mexico. Fortunately, some undesirable scenarios seen in some other states’ eLearning environments (previously mentioned) have largely been averted to this point in New Mexico. More history is presented in Appendix B.

Recently, New Mexico has started taking positive steps to create statewide eLearning support and coordination that will be sustainable and scalable. During 2006, the New Mexico Learning Network facilitated collaborative eLearning planning that involved higher education, K-12, and state government. This planning resulted in a framework for two interrelated initiatives. These include Governor Bill Richardson’s IDEAL-NM (Innovative Digital Education and Learning in New Mexico) initiative, and the Cyber Academy Act (SB209/HB201), a Legislative initiative (NM_Governor, 2006; NM_Legislature, 2007). Both rely on a strategy of leveraging the different strengths and abilities of higher education, K-12, and state government.

New Mexico has an opportunity to become a national model for multi-sector collaboration in eLearning. Many states are struggling to build bridges to greater resource sharing and collaborations for eLearning support between their various public sectors because their educational silos have been reinforced through many years of autonomous development. While New Mexico is currently does not yet have the eLearning support infrastructure apparent in many other states, the opportunity exists to build a collaborative model. The New Mexico Learning Network, which is made up of K-12, higher education, and state government representatives, is working to strengthen cooperation for more effective resource sharing and collaborative educational programs.
**eLearning in K-12**

The following is a general overview of K-12 eLearning in New Mexico. A more detailed description of K-12 eLearning is presented in the Cyber Academy Plan, a separate plan produced to include greater level of implementation detail.

**Overview**

K-12 eLearning has been inconsistently funded in different areas of the state, creating inequity in educational opportunities for New Mexico students. New Mexico public schools reported 171,443 middle and high school students (PED, 2007). Most of those students lack eLearning opportunities due to the absence of a state-led virtual school and affordable high quality online courses. While there are some amount of vendor and district programs in place, the addition of a strong state-led virtual school solution will connect many more of those students to a more consistent statewide program, giving them access to highly qualified New Mexico teachers across the state, allow them to interact with students in other districts, provide them 21st century skill enhancement, and expand the catalog of courses available to them.

In terms of the technical delivery systems, K-12 in New Mexico is drastically under-funded and under-skilled to implement these eLearning systems on a statewide basis. These systems, which are growing in functionality and complexity each year, include learning management systems, web conferencing, ITV networks, and other related systems, not to mention the software interfaces to student information and other data reporting systems.

Some K-12 eLearning programs do currently exist in New Mexico, including small district-level programs, a few inter-district cooperatives, and small vendor-based start-up cyber schools in rural districts. These programs involve a focused number of eLearning courses and programs for a targeted set of students.

**Rural Education Cooperatives (RECs) and Other Consortia**

- **Southeastern REC consortium (REC 8, 9, etc.)** is an eLearning partnership in southeast New Mexico which includes sharing teachers/courses, implementation of a wireless network, and a partnership agreement designed to serve rural school districts. The consortium includes RECs, their member districts, Alamogordo Public Schools, and five institutions of higher education. REC #8 is composed of Dexter, Hagerman, Lake Arthur, and Loving school districts. REC #9 is composed of Capitan, Carrizozo, Cloudcroft, Corona, Hondo Valley, Ruidoso, and Tularosa school districts. Alamogordo Public Schools and five institutions of higher education, New Mexico State University – Alamogordo (NMSU-Alamo), Eastern New Mexico University-Roswell (ENMU-Ros), ENMU-Ruidoso, NMSU-Carlsbad, and New Mexico Junior College are the five members of the consortium developing this network.

- **The Northern New Mexico Network for Rural Education (NNMN) also has been a catalyst for eLearning initiatives. The NNMN is a cooperative of twenty-eight rural school districts, working together to improve the quality of life in rural northern New Mexico by being an advocate and catalyst for the improvement of education for all students.**
In-District eLearning Programs
A number of school districts have been developing in-district solution to address the needs of select student populations in need of services.

- **Mesa Online Academy** – An in-district virtual school in the Roy school district utilizing a vendor curriculum provider (Global Student Network) for self paced courses for individual students that are facilitated by local instructional supervisors (may not be highly qualified in the subject).

- **Rio Rancho Cyber Academy (RRCA)** - The New Mexico Public Education Department received an appropriation of $731,900 in 2005 to launch the RRCA as a stand-alone school within the Rio Rancho school district. Approximately 180 students are currently enrolled in the cyber academy. The RRCA has contracted with out-of-state vendors for asynchronous courses, other related technology, and a system for tracking their students.

- **Portales Online High School** – This program is run within the Portales High School as an option for students to take online course to supplement their regular schedules. The curriculum and eLearning delivery system are supported through the district budget.

- **Wheeler Peak Academy** – An in-district virtual school in the Cimarron school district utilizing a vendor curriculum provider (Global Student Network) for self-paced courses for individual students facilitated by local instructional supervisors (may not be highly qualified in the subject).

- **Other in-district programs** - A number of districts, charter and other public schools are looking at adopting or have “turn-key” vendor curriculum solutions or agreements with colleges and universities for services to certain sub-populations of students. These districts include Los Lunas, Rio Rancho, Albuquerque, and Santa Fe.

K-12 Higher Education Partnerships
There are a number of agreements between state school districts and higher education institutions to provide dual credit courses to high schools. These courses are often delivered via eLearning including web-based, ITV, and hybrid formats. Some students are graduating from high school with a significant number of college/university credits.

Council on Technology in Education (CTE)
The CTE will play an important advisory role for the planned statewide Cyber Academy. The 1994 Technology for Education Act established a seventeen member Council on Technology in Education that was appointed by the State Board of Education in June, 1994 to:

- Advise the State Board of Education and the legislature regarding the establishment of appropriate educational technology standards, technology-enhanced curricula, instruction, appropriations for educational technology, and administrative resources and services for public schools.

- Advise, work with, and provide assistance to the State Department of Education to conduct periodic assessments of the needs for educational technology in the public school system; make recommendations to the State Board of Education on how to meet those
needs; and review school district technology plans/reports.

- Promote the collaborative development and implementation of educational technologies, projects and practices to enhance instructional capabilities.

- Develop and recommend to the State Board of Education a statewide plan to infuse educational technology into the public school system.

Regional Educational Technology Assistance (RETA)

RETA is a statewide partnership that helps New Mexico educators and administrators integrate technology into their classrooms and will play a key role in the NM Cyber Academy by developing eTeacher training and selection of online course vendors. RETA will use the results of the NM Learning Network Best Practices committee to guide the development of a quality assurance framework for the NM Cyber Academy.

Through the US Department of Education's Technology Innovation Challenge Grant and funding from the New Mexico Public Education Department, the RETA program serves the professional development needs of New Mexico's K-12 teachers. RETA brings technology curriculum integration to school sites around the state. During its history, RETA has served teachers in nearly all of New Mexico's 89 school districts. Its mission is to develop the human and technological infrastructure necessary for learning environments that cultivate students who are:

- Ready for school and workplace challenges in a society that is information-driven and global in its demands.

- Able to make thoughtful use of technological tools to access information.

- Able to construct meaning, develop new knowledge, and effectively and efficiently communicate understanding.

- Capable of engaging in educational opportunities online.

eLearning in Higher Education

The majority of New Mexico higher education institutions began using a common learning management system (LMS) based on a pricing agreement established in the late 1990s. The primary LMS vendor did not extend this type of pricing past a certain point, leading to institutions to negotiate separate subscriptions with varying costs, and failure to develop multi-institutional pricing. Additionally, information technology (IT) resource sharing was increasingly needed as institutions found it more difficult to keep up with the data resource requirements because of the growing complexity of the applications, and the growing numbers of students, instructors, and staff placing demands on the LMS and related software applications to have high availability, high reliability, and large capacity. These software applications also need robust fail-over and disaster recovery frameworks, in addition to vigilant capacity/performance monitoring. As application functionality has increased it has become more complex “under the hood,” requiring additional specialized IT skill sets. The ability to attract all of the needed skill
sets to the various data centers around the state pointed to the need for shared data centers established at the larger institutions or through application service provider (ASP) vendor contracts.

New Mexico higher education institutions have been offering distance education and supporting secondary schools for several years. Since 2002, the New Mexico Virtual College (NMVC) has maintained a web-based clearinghouse of distance education courses and programs offered by individual higher education institutions. During 2006, the NMVC changed its charter along with its name to include K-12 and state agencies in 2006, becoming the New Mexico Learning Network.

**Council for Higher Education Computing and Communications Services, CHECS ETC**

Another organization supporting eLearning technology is New Mexico CHECS ETC (Education Technology Consortia) which is made up of Information Technology (IT) professionals from every institution of higher education and most K-12 districts (CHECS ETC changed its charter in 2005 to include K-12 IT leadership). Almost since its creation in the mid-1980s, CHECS ETC has managed the statewide educational network (CHECS-Net) for the benefit of its member institutions. It has also developed many collaborative multi-institutional IT plans and proposals including the technical framework for the current initiatives (NM_CHECS_ETC, 2006).

**eLearning in New Mexico State Government**

State agencies also need to enhance training opportunities for their customers and staff; a need that a statewide LMS and web conferencing system could solve. Just as in education, state agencies also operate in silos. The opportunity exists, through collaboration with higher education and K-12, to bridge these silos with shared resources for eLearning in a way that will advance the practice of online training in a manner not previously available in New Mexico.

**Children Youth and Families Department (CYFD)**

CYFD Professional Development Bureau utilized eLearning for Defensive Driving classes and a pilot program for New Employee Orientation during fiscal year 2006. During that time period, approximately 700 of CYFD’s 2100 employees utilized the system to complete these courses. CYFD plans to continue to use eLearning for Defensive Driving, and add curriculum for Health Insurance Portability and Accountability Act (HIPAA) compliance training. The department will also develop curriculum to be provided via eLearning in various mandatory core classes for Protective Service, Juvenile Probation Officers, and Juvenile Correction Officers training. Once the anticipated statewide LMS vendor has been selected, CYFD anticipates using that hosting environment for staff training. It is anticipated that the use of distance learning will grow to approximately 300-500 employees per year for every course developed.

Juvenile Justice Services (JJS) at CYFD is responsible for the rehabilitation of children who have been committed to CYFD facilities or probationary services by a judge. The intent of the program is to provide the tools and curriculum necessary for these children to continue their education in multiple settings focusing on individual learning goals. Student data will be readily available to teachers and administrators to minimize the loss of educational time when a student transfers between facilities. Educational opportunities are expanded with an online curriculum for students in the juvenile justice program. The flexibility of eLearning lends to the support of
the juvenile facilities. The mobility issues will become non-existent if the youth are moved into different levels of security or different locations.

New eLearning solutions can increase the quality, delivery, and environment for education received by youth committed to juvenile justice facilities. This strategy recognizes that educational success is essential to successful long-term outcomes for clients contributing to reduced recidivism. New eLearning opportunities can help meet the Governor’s policy initiative to close the achievement gap by supporting the children and schools who need the most assistance and to ensure that all students are taught by competent teachers. Proper support for statewide eLearning solutions will strengthen educational infrastructure and help ensure that all students have access to online schools that are safe, adequate, well-maintained, and equipped with current education technology.

New Mexico Corrections Department (NMCD)
The NMCD’s Education Bureau uses many eLearning and technology tools to provide quality educational and vocational programs and library services that will assist an incarcerated individual to become a responsible member of the family, workforce, and community upon release. This will be accomplished through teamwork, dedication, and collaboration with other departments, agencies, and the community at large.

Besides providing inmates with technology-assisted adult basic education and ESL options, partnerships with several NM higher education institutions provide postsecondary opportunities via eLearning. For example, in August of 2006, the NMCD Strategic Plan reported that 791 offenders were enrolled in post secondary eLearning classes through ENMU-Roswell and Mesalands Community College. Average grade point average of offenders was 3.0 and 22 made the Dean’s list for academic excellence (NMCD, 2006).

The following educational assessments were used and are available as part of the ENMU distance education model:

- **CASAS** is used for new students entering postsecondary programs. All new students must have 10th grade reading and 12th grade math to enter.
- **PLATO** is used for remediation of students who do not meet minimum CASAS scores. Students are placed in PLATO based on the original level(s) achieved in CASAS.
- **ACCUPLACER** is used (when possible) for placement but is not required since all incarcerated students are officially considered “non-traditional”
- **Choices** is available in all computer labs for students to do career exploration.
- **Workkeys** assessments will be available to students.
- **Keytrains** will be available to students who need remediation for the Career Readiness Certifications.
- **CLEP** will be administered electronically to all qualified students.

New Mexico eLearning Plan (2000-2009)
Other State Agency Efforts Relative to eLearning

Some of the state agencies offer self paced workshops which may include a video component such as the “None for the Road” workshop which is offered by the Motor Vehicle Division as a self-study course including a student manual/workbook and a video which can be obtained via postal mail. Availability of newer eLearning tools would make online workshops and related assessment more relevant for staff and customers served by the agencies.

New Mexico Department of Health (NMDOH)
While telehealth is primarily concerned with the delivery of real-time health care services, there are educational applications that will benefit from an improved pallet of eLearning tools and techniques. Also, both the remote health and education missions have a common need for the improvement of New Mexico’s statewide telecommunications infrastructure. This common interest in bandwidth, along with the improvement of eLearning tools and telehealth networks, will help expand healthcare access in rural and underserved areas (NMDOH, 2007).

The New Mexico pandemic plan calls for the NMDOH, in collaboration with partners, to develop, test, and drill on delivery of “Just in Time” educational materials and “real time” distance clinical consultation using a variety of communications networks including Internet tools, telehealth systems, and other mechanisms in situations requiring rapid response where quarantines are required (NMDOH, 2007).

Department of Workforce Solutions (DWS)
The Department of Workforce Solutions seeks to enhance the productivity and competitiveness of New Mexico businesses and industry by improving the quality and availability of the New Mexico workforce. This will be accomplished through a system that offers universal access to lifelong learning based on relevant local and regional labor market needs, via integrated customer-focused accountable service partnerships.

DWS strives to provide a consistently high quality workforce preparation service that is responsive to businesses, job seekers’ and incumbent workers’ needs and prepares workers to compete in a knowledge-driven, global economy.

New Mexico Economic Development Department (EDD)
The Economic Development Department is interested in the development and implementation of their workshops and seminars provided to the business community and New Mexico citizens utilizing an eLearning environment. EDD programs such as the Job Training Incentive Program (JTIP) funds classroom and on-the-job-training for newly created jobs in expanding or relocating businesses for up to six months. Custom training at a New Mexico public educational institution may be provided.

EDD offers client consulting that will assist companies to navigate the international business world. Consulting services include: assistance in establishing an international sales agent network; identifying target countries and markets of opportunity; developing a comprehensive international strategy for companies; among other services. These types of services can readily be provided online.

New Mexico eLearning Plan (2000-2009)
Plan for eLearning in New Mexico (2007-2009)

The current plan for statewide eLearning have largely been facilitated by the New Mexico Learning Network (NMLN) with collaborative efforts of leaders from school districts, RECs, colleges, universities, the NM Higher Education Department, the NM Public Education Department, and other state agencies. These stakeholders engaged in significant statewide planning events during 2006 which became the framework for several state-level initiatives in the 2007 legislature including the Governor’s initiative and some key legislation.

Figure 1 provides an overview of the foundational components for long term success of eLearning in New Mexico. As can be seen by the diagram, the learner (student) is at the top of the pyramid in terms of importance. The current eLearning Plan primarily addresses improving the upper foundational levels while choosing to leave the issue of improving physical network connectivity to other initiatives such as “Wire NM” or “MAG-Net Pricing Agreements”. While improvements in statewide network connectivity is of supreme importance to New Mexico, and championed by the NM Learning Network members, the current plan will strive to work to the best extent possible within current of network connectivity constraints.

**Figure 1 – Foundation Building Blocks for eLearning Quality**

New Mexico Learning Network and Planning Framework

The NM Learning Network is comprised of eLearning leaders in K-12, higher education, state agencies, and industry. The NM Learning Network is the primary entity facilitating statewide eLearning planning between the various state stakeholders. The NM Learning Network is a diverse entity with a mission similar to the Ohio Learning Network (see Appendix A) as a convener of the various eLearning stakeholder groups, and as a facilitator of specific statewide eLearning initiatives such as IDEAL-NM and the statewide Cyber Academy. Working with the various stakeholder groups the NM...
Learning Network facilitated several planning events and organized numerous volunteer committees comprised of statewide stakeholders during 2006 and 2007. Part of this planning recommended further evolution of the NM Learning Network to not only be an affinity group for eLearning leaders in the state, but to also have a facet that would become a structural part of the state government as a way to bridge the higher and public education departments as well as the other agencies. How this will evolve is still being determined. The goal is to provide services that can bridge various stakeholders who are interested in expanding eLearning opportunities for New Mexico learners.

**Vision and Mission**

The NM Learning Network vision is to enable New Mexicans to improve their quality of life by facilitating access to training, education, and student services – anyplace, anytime. The NM Learning Network mission is to support current and emerging learning technologies; and to facilitate access to high-quality, affordable, student-centered learning opportunities for all New Mexicans through collaboration among K-12, higher education, and state agencies.

**Areas of Support**

Besides the role of overall convener of eLearning stakeholders, the purpose of the NM Learning Network has been to provide support for an electronic clearinghouse, or web portal that enables learners and academic advisors to locate existing eLearning courses and programs. This and other services will be created or improved as a result of the IDEAL-NM initiative and the Cyber Academy Act. Support services will be tailored to best support each sector (K-12, higher education, and state government.). Figure 2 below shows a conceptual view of planned services.

**Figure 2** – Conceptual Collaborative eLearning Model

**Collaborative eLearning Model for New Mexico**

*Primary Concept:* Learners in New Mexico have access to a wide variety of eLearning opportunities within a collaborative educational system with the least amount of geographic, scheduling, or administrative barriers.

- **Providing/Receiving eLearning Courses**
  - Higher Education
  - Rural & Urban Schools
  - Government Agencies

- **NM Learning Network eLearning Service Center**
  - Online Catalog/Schedule for eLearning courses, programs, and workshops provided by existing schools, colleges, universities, gov. agencies, etc.
  - Central Support Desk (technical and administrative) for eLearning Liaisons, Instructors, Facilitators, etc.

- **Statewide Cyber Academy Administration and Support**
  - eLearning planning for NM
  - Alignment with and support for other educational initiatives

- **Hosting Centers/Services for eLearning Technologies**
  - Learning Management System
  - “Live 2-way” Web Conferencing

- **Receiving/Providing eLearning Courses**
  - Rural & Urban Schools
  - Government Agencies
  - Higher Education
  - Workforce Development

New Mexico eLearning Plan (2000-2009)
The eLearning Portal site serves as a learners' point of access to dynamic, quality learning experiences. The eLearning Portal allows existing schools, colleges and universities to share resources and capacity to better meet the educational needs of New Mexico, from K-12 to higher education, and continued professional development. This eLearning Portal is slated to be revamped and improved as part of the IDEAL-NM initiative.

For higher education there has been searchable directory of online programs and courses available from New Mexico colleges and universities including information about how to enroll, and links directly to the institution’s website. This service is slated for improvement. Also analysis is planned of other collaborative learner support processes such as a statewide common online admissions form. These enhancements will be looked at more closely after the Cyber Academy achieves operational stability.

With the successful funding of Governor Richardson's IDEAL-NM initiative, the NM Learning Network will expand support a statewide Cyber Academy (mid/high school). The Cyber Academy will address the needs of students throughout the state, and in particular those students in rural areas. Pilot programs are already underway and the NM Learning Network anticipates regular registration of students in the NM Cyber Academy by the fall semester 2008.

In support of the Cyber Academy Act, the NM Learning Network eLearning Portal will have a catalog of K-12 classes available along with course reservation processes. Academic advisors in local schools will be able to sign up students to take those classes. This process will make it easier for advisors, students, and parents to find the classes that their students need and to be able to reserve a seat in that class for their students. For state agencies there is no system in place to enroll in eCourses as of this date. This will also be examined more closely after the statewide Cyber Academy is functioning and operational. The plan is to develop a catalog of courses available for state employees to register for classes through the NM Learning Network eLearning Portal.

The NM Learning Network will serve as a resource for K-12, higher education, and state agencies. NMLN is a partner with these educational institutions as they reach out to serve students, employees, and stakeholders interested in online degree programs, courses, and workshops. There is an increasing variety of services that the NM Learning Network will need to offer to meet the needs of New Mexico learners. Figure 3 is another conceptual diagram that shows the service components that need to be taken into consideration when designing eLearning support models. This is just another way to conceptualize the learner’s needs and many of the services that will have to be provided by one of the eLearning support partners.
The work facilitated by the NM Learning Network included the creation of a framework for IDEAL-NM (Innovative Digital Education and Learning in New Mexico), and the Cyber Academy Act that was passed in the 2007 legislative session. The three main goals of these initiatives include:

1. Implementation of a statewide eLearning delivery system for K-12, higher education, and state agencies. This includes statewide software licensing for a learning management system (LMS) and web conferencing system. Also included are consolidated data center operations for these systems to be determined as the result of an RFP process.

2. Creation of a state-led virtual school (NM Cyber Academy) in partnership with local schools, districts, and RECs throughout the state.

3. Creation of a statewide eLearning Service Center for K-12, higher education, and state agencies to support the use of the shared eLearning delivery system and the administration of the NM Cyber Academy.

In preparation for the implementation of the state-led virtual school, the NM Learning Network has sponsored a number of planning activities to develop a draft collaborative policy framework and implementation plan. Additionally, a formal statewide Needs Assessment of K-12 eLearning priorities was commissioned from the North American Council for Online Learning (NACOL), a national organization supporting best practices in virtual school development (NACOL, 2007).
The results of the study can be viewed at [http://www.nmln.net](http://www.nmln.net), as well as many preliminary NM Learning Network planning documents.

The information in this plan is presented in a strategic context for the intended broader audience. The Project Management Plan (PMP) for IDEAL-NM is a separate document that includes detailed budgets, milestones, implementation strategy, technical detail, and responsibilities. Highlights of the IDEAL-NM project are described on the following pages.

In 2007, the New Mexico legislature appropriated $7.5M to implement IDEAL-NM and the Cyber Academy Act. The three main goals mentioned earlier are listed below with related subgoals. For additional detail please refer to the Project Management Plan.

1. Implementation of a statewide eLearning delivery system by
   a. Initiating an Request for Proposal (RFP) for a learning management system (LMS) for use by K-12, higher education, and state agencies.
   c. Establishing statewide LMS/Web Conference hosting center(s) with Service Level Agreements between colleges, universities, school districts, and state agencies.

2. Creation of a state-led Cyber Academy to
   a. Utilize the statewide LMS and web conferencing systems to deliver quality eLearning courses to K-12 students (initially focused on grades 9-12 & rural schools) and to deliver teacher and staff professional development.
   b. Build a statewide eLearning model with long-term sustainability and scaleable to a large number of learners (students). The model will be developed in partnership with local schools, emphasizing collaboration rather than competition.
   c. Build New Mexico’s own eLearning capacity and skills based on national best practices. This includes developing quality eLearning courses for which NM will hold intellectual property rights. This also includes developing quality eTeachers who are licensed to teach in New Mexico. (primary strategy)
   d. Engage vendor partners for online courses, teachers, and unique turn-key solutions for specialized needs. (secondary strategy)
   e. Develop statewide Cyber Academy services using minimal staffing as part of the statewide eLearning Service Center.
   f. Align with requirements of 2007 Cyber Academy Act.
   g. Open at the projected timeline of fall, 2008.

3. Creation of a statewide eLearning Service Center to provide:
   a. Help Desk services with technical support for use of statewide LMS and web conferencing systems. Also oversee hosting service contracts, and front-line Cyber Academy support.
   b. Web-based portal with targeted online services related to eLearning courses/programs for K-12, higher education, and state agencies.
c. Administration for the statewide Cyber Academy (grades 9-12) including hiring eTeachers, working with local schools, and participation in program assessment.

The program will initially focus on the establishment of a statewide Cyber Academy that will allow all public middle and high schools to acquire eLearning courses for their students, with initial consideration for rural districts. The Cyber Academy will grow in scale to be a statewide program by leveraging existing examples nationwide, as well as the experience of a number of existing localized eLearning initiatives already operating in the state. These examples include multi-district collaborations in various areas of the state, the Rio Rancho Cyber Academy and Albuquerque Public Schools distance education program. Later phases will roll out eLearning services focused on higher education, workforce development, and state agencies that provide professional development. Higher education and state agencies will have an immediate opportunity to take advantage of the enterprise eLearning tools and technical support provided through IDEAL-NM.

Figure 4 below shows the governance of the statewide eLearning Service Center being implemented through the IDEAL-NM initiative. The Executive Director provides overall leadership and should be positioned so that they can support eLearning initiatives in higher education, public education, and state agencies. This person will coordinate a variety of resources aligned from various sources to support eLearning initiatives. The NM Learning Network Advisory Board will provide input to the Executive Director of the eLearning Services Center, the NM Higher Education Secretary and the NM Public Education Secretary. will be made up of representatives from all the major eLearning stakeholder groups in New Mexico. This includes eLearning professionals and educational leaders from education, government agencies, and industry.

Figure 4 – Governance Structure for Statewide eLearning Service Center
The statewide Cyber Academy will develop, purchase, and certify statewide online courses. The content of these courses will be available to all participating state school districts. School districts can use their own instructors to teach the students or they can contract with the Cyber Academy to contract teachers (mostly part time) to instruct courses. The Cyber Academy will prioritize course development based on the identified needs in New Mexico detailed in the NACOL survey. The Cyber Academy will also facilitate professional development and training for teachers, administrators, and staff. This will be done by working with colleges, universities, and contracted teacher training programs.

The NM Learning Network eLearning Portal will continue to provide a clearinghouse and coordination functions for all eLearning offered by New Mexico higher education, K-12, and government agencies.

**Project Management Plan: Detailed Implementation for IDEAL-NM**

The current plan includes a detailed implementation plan for IDEAL-NM. This project involves the implementation of enterprise technology systems funded by the State of New Mexico, which therefore requires a rigorous process of project management (OCIO, 2005). In compliance with this process, the project shall be managed by a qualified project manager; using a formal project management methodology, processes, and techniques. The project will have Independent Verification and Validation (IV&V) including analysis and monitoring of risk at periodic intervals during the project management lifecycle, and mitigating risks before there is a negative impact on the project schedule, scope, or budget. A phased product development lifecycle methodology will be deployed. The project budget is documented in the project management plan by phases and by deliverables.

The project manager for IDEAL-NM was appointed in May 2007 and is working out of the New Mexico Higher Education Department CIO’s office. A draft version of the Project Management Plan (PMP) was produced in June 2007. The project management plan is a formal document approved by the Executive Sponsor and the Department of IT (DoIT). It is developed in the initiation phase used to manage project execution, control, and project close. The primary uses of the project plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines. A project plan includes other plans for issue escalation, change control, communications, deliverable review and acceptance, staff acquisition, and risk management, among others.

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2 Process of eLearning course certification has not been determined at the time this report is being produced.
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<th>Business Function</th>
<th>Description</th>
<th>Funding Allocation</th>
<th>Projected Cost (in thousands)</th>
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<td>Administration</td>
<td>Program has 3 full-time administrators: Exec. Director (leadership-strategic planning), Cyber Academy Director (academic coordination), and Director of eLearning Services (technology coordination). Management of the initiative will increase significantly as more learners, teachers and courses are added.</td>
<td>HED/PED</td>
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<tr>
<td>Budget and Finance</td>
<td>Costs for financial support, payroll, accounting, budgeting. (budget analyst)</td>
<td>Local school, Institutions, Agencies</td>
<td>Absorbed by agencies, administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Coordination</td>
<td>Course development or acquisition, and curriculum management. Costs include class tuition, course review, and instructional materials.</td>
<td>PED/HED; and School Districts/ Institution funding formula</td>
<td>$130</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$1,787</td>
</tr>
<tr>
<td>Teacher Prof. Development including travel</td>
<td>All districts</td>
<td>$102</td>
<td>Included above</td>
</tr>
<tr>
<td>RETA (Regional Education Technology Assistance) Teacher training/professional development</td>
<td>PED/RETA</td>
<td>$400</td>
<td>$400</td>
</tr>
<tr>
<td>Other Support Services</td>
<td>RECds (Regional education Cooperatives) will serve as “regional support centers” for training, technology, and HD support.</td>
<td>PED/RECs</td>
<td>$120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$180</td>
</tr>
<tr>
<td>Teachers (K12)</td>
<td>60 full-time teachers (at $50,000). Costs will be for full and part-time teacher’s salary including benefits. Salary and benefits should be equivalent to compensation to the average teacher salary in the state. eLearning teachers should have extensive teaching experience and possibly advanced degrees. Teacher/student ratio is determined by existing state administrative</td>
<td>School Districts</td>
<td>Teacher cost recovery model used for course pricing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Teacher cost recovery model used for course pricing</td>
</tr>
</tbody>
</table>

New Mexico eLearning Plan (2000-2009)
### Instructors (Higher Ed, Trainers)

Responsible for instruction, course management, student evaluation, and communications.

<table>
<thead>
<tr>
<th>Institutions, State Agencies</th>
<th>Absorbed by agency</th>
<th>Absorbed by agency</th>
</tr>
</thead>
</table>

### Public Information

Information & marketing materials, publications, travel funds, etc.

<table>
<thead>
<tr>
<th>Agencies</th>
<th>$10</th>
<th>$50</th>
</tr>
</thead>
</table>

### Student Services

This will be instructional support supervisors (counselors, advisors, mentors)

<table>
<thead>
<tr>
<th>Local school, Institutions, Agencies</th>
<th>Absorbed by agency, cost recovery model used</th>
<th>Absorbed by agency, cost recovery model used</th>
</tr>
</thead>
</table>

### Evaluation

Course/Program evaluation will be managed through the agency accountability contract’s performance measures (if applicable). The process should provide data collected at the agency level for accountability purposes with the intent to improve offered services.

<table>
<thead>
<tr>
<th>Local school, Institutions, Agencies</th>
<th>$20</th>
<th>$50</th>
</tr>
</thead>
</table>

### Facility Management

Place where the state-led program is located. Includes office space, meeting rooms.

<table>
<thead>
<tr>
<th>PED</th>
<th>$57</th>
<th>$57</th>
</tr>
</thead>
</table>

Office set-up: equipment and materials, office supplies.

<table>
<thead>
<tr>
<th>NMLN</th>
<th>$20</th>
<th>0</th>
</tr>
</thead>
</table>

### INFORMATION TECHNOLOGY SERVICES

<table>
<thead>
<tr>
<th>INFORMATION TECHNOLOGY SERVICES</th>
<th>Initial Start-Up</th>
<th>Sustainability</th>
</tr>
</thead>
</table>

#### Information Technology Coordination

Costs include Help Desk Support staff, automated help desk, centralized registration.

<table>
<thead>
<tr>
<th>HED (HD staff)</th>
<th>$139</th>
</tr>
</thead>
</table>

HD software, web Portal services

<table>
<thead>
<tr>
<th>NMLN</th>
<th>$350</th>
<th>$200</th>
</tr>
</thead>
</table>

IDEAL project management

<table>
<thead>
<tr>
<th>HED</th>
<th>$88</th>
<th>$88</th>
</tr>
</thead>
</table>

#### Equipment, Software, Materials

Data center hardware and software will be purchased to consolidate and host LMS and web-conferencing tools for eLearning in state.

<table>
<thead>
<tr>
<th>HED/Data Centers</th>
<th>$6,400</th>
</tr>
</thead>
</table>

RFP evaluation travel, demo costs.

<table>
<thead>
<tr>
<th>NMLN</th>
<th>$8</th>
<th>0</th>
</tr>
</thead>
</table>

Licensing, Maintenance, Tech Support; includes data/voice devices for program staff.

<table>
<thead>
<tr>
<th>HED</th>
<th>$334</th>
<th>$2,714</th>
</tr>
</thead>
</table>

#### Unanticipated Costs

Unanticipated costs need to be addressed to ensure successful implementation of state-led program. All cost estimates are estimates that could change.

<table>
<thead>
<tr>
<th>All</th>
<th>$100</th>
</tr>
</thead>
</table>

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New Mexico eLearning Plan (2000-2009)
Figure 3a, 3b, and 3c provide high level timelines from the PMP for the three major components of the IDEAL-NM project. Dates are projected as of the time the current plan. A copy of the PMP may be downloaded from http://www.nmln.net, or from the New Mexico Higher Education Department’s website http://www.hed.state.nm.us.

**Figure 3a** – eLearning Delivery Systems Implementation – Projected Timeline

**Figure 3b** – Cyber Academy Implementation – Projected Timeline

New Mexico eLearning Plan (2000-2009)

Significant statewide planning events were facilitated by the NM Learning Network during 2006 and 2007, resulting in the current plan which maps out steps through FY 2009; however, given the rapidly changing nature of eLearning methods, technology, and stakeholders, it is recommended that a statewide strategic planning process be conducted during 2008-09 that involves all key stakeholder groups to develop a plan spanning the 2009-2012 timeframe. This future planning will focus more on long-term action steps with goals for eLearning in New Mexico including:

- Developing a more skilled workforce to support New Mexico economic development
- Minimizing barriers of distance and scheduling to educational/training opportunities
- Creating a collaborative, scaleable, cost-effective eLearning system for K-12, higher education, state agencies, and workforce development
- Bringing highly qualified teachers and expanded course choices to rural (and urban) schools
- Increasing just-in-time workforce development opportunities while minimizing travel costs
Building capacity and skill for eLearning in NM using national best practices

Development of a statewide cost model for eLearning in New Mexico

While the current plan is focused on implementing a baseline support infrastructure in New Mexico, the future planning strategy will address more systemically how eLearning can support or will impact the state’s educational strategies. The action plans will include the P-20 educational bridging initiatives listed below.

- HED/PED Alignment Task Force - Alignment of high school competencies with college placement requirements through a statewide dual credit agreement, cut score policy, and high school assessment system.

- Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) – a six-year U.S. Department of Education grant to increase college preparation among low income students in 21 school districts (an estimated 6000 students)

- Achieving the Dream - a Lumina Foundation grant to help community college students succeed by strengthening policies at the state and college levels

- Statewide Data Sharing Task Force – The Task Force goal is to develop a statewide plan for student data sharing in order to provide research capability to measure results of education reform, and determine the effectiveness of education policies.

- Establish data sharing through existing 2007 Tribal/NMHED data sharing agreement and explore collaborative student support initiatives for statewide tribal communities.

The future strategic planning will also address how eLearning can support or will impact the legislative agenda for education reform. Key 2007 legislation includes:

- SB209/HB201: Cyber Academy Act - Provide online courses to support an executive initiative to keep pace with the digital age. Promotes collaborative development and implementation of educational technologies, projects, and best practices to enhance teaching and learning capabilities.

- SB211: High School Reform - Addresses high school reform as part of a P20 system (PreK to college) with policy objectives for the Public Education Department (PED) and New Mexico Higher Education Department (HED) working together with public schools, colleges and universities, and the legislature. Requires NMHED and institutions of higher education to develop a system to assign a unique number for each state public school student.

- SB561: High School Redesign - Addresses high school redesign through modifying the timing and purpose of high school assessments, using them to inform students about career and postsecondary options, increasing the age a student may legally drop
out of school, changing graduation requirements, and establishing the structure for a middle and high school literacy initiative. High school students should be reasonably informed about honors, advanced placement, dual credit, or distance learning courses as well as career clusters or remediation programs deemed appropriate from readiness assessments; The student’s Next Step Plan shall include one or more of the following: advanced placement or honors course, Dual credit course, or distance learning course; Proposes a high school exam in grade nine, a college readiness exam in grade ten, and a workplace readiness exam in grade eleven.

SB943: Dual High School & Postsecondary Credits Clarifies dual credit by defining student eligibility for participation, payment for dual credit tuition and related expenses, and dual credit administration through code revision by NMHED and PED. Requires the creation of a dual credit master agreement to be implemented statewide.

HB308/SB355/SB573: Tribal College Affordability Scholarships Allow scholarship funds to be used at tribal colleges and define an eligible student to include those attending part-time and who have enrolled no later than 120 days after high school graduation.

HB911: Uniform Curricula in Each School District Aligns curricula in math, language arts, and science in each school district to meet state standards. Math alignment should be in place by the 2008-09 school year; language arts and science by the 2009-10 academic year. Requires professional development relating to curriculum be aligned to state standards.

SB160: Require Use of Standardized Grading System Requires PED to establish grading system based on 4.0 or 100 point scale for grades five through twelve aligned with state academic content and performance standards. Results of standards-based assessments must be included in each schools grading system.

SB552: Math & Science Education Act Creates the PED Mathematics and Science Bureau, Advisory Council, and Proficiency Fund. Defines bureau and council duties, council composition, and fund purpose. Requires council to produce annual report on math and science student achievement. Requires proficiency fund recipients to provide annual report to bureau.

HB518/SB537: Student with Disabilities Scholarship Provides scholarships to student with disabilities. Scholarships will be provided to students and allow students a longer time frame to complete classes.
Those engaged in the implementation details of the current plan are anxious to achieve a sustainable delivery and support system in New Mexico which will allow future planning to focus on using this infrastructure to help achieve the educational goals for the state. Also an ongoing collaborative planning process about every three years will allow the eLearning Plan for New Mexico to be responsive to changes in state priorities, learner needs, and an evolving technology environment. This recurring approach to planning will help ensure there are sustainable and relevant eLearning opportunities in New Mexico.
Glossary of Terms

ASP (Application Service Provider): An organization (typically a for-profit vendor) that runs software applications for other organizations (customers) for a fee. These arrangements (contracts) are typically performed as specified in a Service Level Agreement (SLA) which outlines the how the service will be performed.

Application sharing: A feature that allows two or more people in different locations to work together in a single live software application. In application sharing, one user launches the application and it appears on all participants’ computers simultaneously. Both users can input information and otherwise control the application using the keyboard and mouse. Although it appears that the application is running on both PCs, it actually is running on only one. The person who launched the application may have the option to lock out the other person from making changes, so the locked-out person sees the application running but cannot control it.

Assessment: Process used to measure student learning and other human characteristics. There are two main types of assessment, Summative and Formative. Summative assessment is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign students a course grade. Formative assessment is generally carried out throughout a course or project. Formative assessment, also referred to as educative assessment, is used to aid learning. In an educational setting, formative assessment might be a teacher (or peer) or the learner, providing feedback on a student's work, and would not necessarily be used for grading purposes. Summative and formative assessments are referred to in a learning context as "assessment of learning" and "assessment for learning" respectively. Evaluation and assessment are two words often used interchangeably, they are two different concepts. Put simply we assess people and evaluate things or objects.

Asynchronous: A type of communication that occurs with a time delay between steps in the dialog, allowing participants to respond at their own convenience. Literally "not synchronous"; in other words, not at the same time. Asynchronous capabilities give learners access to course materials, including readings, embedded and streamed multimedia, and external Web sites. They also let learners participate in facilitated discussions, and complete assignments individually and collaboratively. A more narrow definition is offered by the Asynchronous Learning Networks (www.aln.org).

Audio Conferencing: In the context of a web-delivered technology, this term generally refers to voice conferencing using the voice over the internet protocol (VoIP). The equivalent of a telephone conference using internet services, generally through software installed in a web browser. Implementations range from half duplex to full duplex. The term may also be used to refer to standard telephone conferences.

Best Practices: "The adoption of work practices which, when effectively linked together, can be expected to lead to sustainable world-class outcomes in quality, customer satisfaction, flexibility, timeliness, innovation and cost-competitiveness." (See Inglis, Ling, & Joosten (1999) pp. 157-173, 196)
**Browser Interface:** Denotes that the host software allows use of most product features through Java-enabled browser such as Internet Explorer or Firefox. There is often an implied assumption that some additional software (generally referred to as a "java applet" or a "plugin") has been added to the browser to increase selected functionality.

**CMS - Course Management System:** (also see LMS and LCMS) Typically web-based software allowing instructors to manage materials distribution, assignments, communications and other aspects of instruction for their courses. Examples are Angel, Blackboard, Desire2Learn. (See also LMS and LCMS)

**CMS - Content Management System:** (alternate definition) Software that manages media assets, documents, and Web pages for delivery and maintenance of traditional web sites.

**Chat:** Generally refers to real-time, text-based conversation between two or more individuals connected online. As you type, everything you type is displayed to the other members of the chat group. Some implementations provide for private communications between individuals, most packages provide for a group chat. Some chat software now features voice-enabled chat.

**Collaborative Learning:** A learning environment in which individual learners support and add to an emerging pool of knowledge of a group; emphasizes peer relationships as learners work together creating learning communities.

**Computer-based training (CBT):** An interactive instructional approach in which the computer, taking the place of an instructor, provides a series of stimuli to the student ranging from questions to be answered to choices or decisions to be made. The CBT then provides feedback based on the student's response. More generally can refer to all training that is delivered through a personal computer or workstation.

**Content Expert:** (also subject expert) Person who usually holds a credential certifying mastery in a specific area of knowledge. These individuals typically identify and decide what knowledge will be taught. In K-12 this is done by curriculum groups and in higher education by individuals.

**Correspondence Education:** First generation in the evolution of distance education; with the advent of postal delivery in the mid 1880s, interaction between learners and teachers at a distance was possible for the first time. In the United States, correspondence became known later as "independent study" and "home study" before becoming recognized as part of the expanding field of "distance education." Interaction by surface mail is still widely used, especially in less developed countries. (See Moore & Kearsley (1996) pp. 20, 36, 199)

**Counselors:** Specialists in learning who help individual students with academic or personal problems that interfere with learning. In North American institutions the term "advisor" is more commonly used. Quite often course instructors are required to provide advising.

**Course Design:** Setting learning objectives, choosing media applications, planning evaluation and preparing instructional strategies in advance of student recruitment and development of course materials.
**Course Team:** Group of specialists in content, instructional design, learning and technologies convened to produce a distance education course.

**Curriculum Model:** The structure in which a program of study is offered. Distance education courses of study are divided into either a subject-matter-oriented curriculum model or a competency-oriented model. The distinction is an important consideration for design, delivery, and assessment.

**Development Team:** Group of individuals, numbering from two to more than 20, who work together to design, develop, and facilitate/teach a distance education course. (See Moore & Kearsley (1996) p. 104)

**Dialog:** "Interplay of words, actions, ideas, and any other interactions between teacher and learner; determined by the educational philosophy underlying the course; influenced by size of learning group and the learners' language." (See Moore & Kearsley (1996) p. 201)

**Distance Education / Distance Learning / Distributed Learning:** A system and a process that connects learners and instructors who are in different locations. Distance learning has historically involved correspondence courses, video, or satellite broadcasts. With the connectivity of the Internet and a new generation of software applications, distance learning has evolved into a new model, which provides higher quality and more flexibility and which is more appropriately called “distributed learning.”

**eLearning:** Encompasses several other related terms including distance education, distance learning, online learning, web-based courses, ITV-courses, virtual learning, online courses, ITV, open learning etc. eLearning refers to learning opportunities where the learner and instructor are not physically in the same location and may be interacting asynchronously or synchronously online. eLearning typically helps bridge both geographic and schedule barriers for the learner. “eLearning” is a term used extensively in the current plan.

**eTeacher:** Instructor highly qualified in both eLearning methodologies and course subject area. Instructor is physically separated from their students and the local Instructional Supervisors, but typically have frequent interaction with both.

**Email (Electronic mail):** The exchange of electronic messages and computer files between computers that are connected to the Internet or some other computer network.

**Evaluation:** The Evaluation has several distinguishing characteristics relating to focus, methodology, and function. Evaluation (1) assesses the effectiveness of an ongoing program in achieving its objectives, (2) relies on the standards of project design to distinguish a program's effects from those of other forces, and (3) aims at program improvement through a modification of current operations. Evaluation and assessment are two words often used interchangeably, they are two different concepts. Put simply we assess people and evaluate things or objects.

**f2f (face to face):** being physically in the same place for a meeting, class, or training.
**Facilitation:** Assisting /guiding approach ("guide-on-the-side") to a learning situation; can be contrasted to the directive teacher-instructor ("sage-on-the-stage") approach. (See Inglis, Ling, & Joosten (1999) pp. 31-33). Heavily influenced by humanistic psychology.

**Formative Evaluation:** Evaluation taken during a project or course to monitor progress; often used to improve segments of the project or course to respond to revealed weaknesses in the design. (See Inglis, Ling, & Joosten (1999) pp. 124-125)

**Highly qualified teacher:** Term often associated with federal No Child Left Behind Legislation. When used with respect to any public elementary school or secondary school teacher teaching in a State, term means that (i) the teacher has obtained full State certification as a teacher (including certification obtained through alternative routes to certification) or passed the State teacher licensing examination, and holds a license to teach in such State, except that when used with respect to any teacher teaching in a public charter school, the term means that the teacher meets the requirements set forth in the State's public charter school law; and (ii) the teacher has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis (for extended definition see http://www.ed.gov/policy/elsec/leg/esea02/pg107.html).

**IMS - Instructional Management Systems Project:** An investment membership of academic, commercial and government organizations developing a set of specifications (standards) and prototype software for facilitating the growth and viability of distributed learning on the Internet. See http://www.imsproject.org/.

**Independent Study:** Term used in North American universities from the mid 1960s in place of "correspondence study," partly to loosen associations with for-profit correspondence schools, partly to accommodate emerging, non-text media, and partly to emphasize the greater autonomy of the student in the teacher-learner transaction (also correspondence, home study, self study).

**Instant Messaging:** a system allowing users to know when others in their "group" are online and to interact with them via text, voice chat and or other online modes of communication.

**Instructor-led training (ILT):** Training in which learners are taught by an actual person: an instructor, teacher or faculty member. Instructor-led training can occur synchronously or asynchronously.

**Instructional Design:** A system of developing well-structured instructional materials using objectives, related teaching strategies, systematic feedback and evaluation. (See Moore & Kearsley (1996) p. 102)

**Instructors (also tutors):** Specialists in learning who interact through technology with students as they learn content, usually designed by course team, though quite often by the instructors themselves.

**Instructional Supervisor:** Person to monitor progress and provide guidance. Person is typically physically present with eLearning student, but may not be a content expert in the subject of the
distance learning course. This person typically interacts with local students on a regular basis and the primary instructor(s) at-a-distance as needed. (See Local Instructional Supervisor)

**Intellectual Property:** Ownership of works resulting from a person's thoughts. Important issue in distance education as courseware is made widely available. Copyright legislation provides for some protection. (See Inglis, Ling, & Joosten (1999) p. 29)

**Interaction:** Exchange of information, ideas, and opinions between and among learners and teachers, usually occurring through technology with the aim of facilitating learning. A widely cited concept of interaction discriminates between learner-teacher interaction, learner-learner interaction and learner-content interaction. (See Moore and Keasley (1996) pp. 128-132)

**Just-in-Time learning:** "An approach to educational delivery in which small segments of learning are delivered when and where the need arises." Not based on fully understanding, but on specific problem-solving implementations. Response to education and training needs in a rapidly changing environment. (See Inglis, Ling, & Joosten (1999) p. 195)

**LCMS:** Learning Content Management System. Multi-user enterprise software that allows organizations to author, store, assemble, personalize, and maintain learning content in the form of reusable learning objects. (See CMS)

**LMS:** learning management system. Enterprise software used to manage learning activities through the ability to catalog, register, deliver, and track learners and learning. (see CMS)

**Learning:** A process that "builds on or modifies understanding, capacities, abilities, attitudes and propensities in the individual." (See Inglis, Ling, & Joosten (1999) pp. 104-105) There are different theories about learning, the most important being Humanistic, Behavioristic, Cognitive and social learning, each supports a different approach to teaching and therefore to distance education.

**Lifelong Learning:** Learning throughout the lifetime with emphasis on independent study determined by contextual personal needs. (See Moore & Kearsley (1996) pp. 238-239)

**Learning Object:** a discrete, reusable collection of content and assessment used to present and support a single learning objective. Akin to programming subroutines, the learning object is the controversial core of industry standards for interoperability. (a.k.a. reusable learning object)

**Listserv:** A generic term that has been given to useful software programs that enable e-mail-based dissemination of topical information to subscribers. When e-mail is addressed to a listserv, it is automatically broadcast to everyone on the list. The result is similar to a newsgroup or forum, except that the messages are transmitted as e-mail."

**Media:** Messages that are distributed through the technologies, principally text in books, study guides and computer networks; sound in audio-tapes and broadcast; pictures in videotapes and broadcast; text, sound and/or pictures in a teleconference.
**Multimedia:** A very general term that usually refers to computer programs that use a combination of sound, video, animation, pictures, and/or text.

**Multipoint:** Communication configuration in which several terminals or stations are connected. This differs from point-to-point, where communication is between two stations only.

**Needs Assessment:** Process aimed at identifying priorities for the cost-effective allocation of resources. A needs assessment might precede the decision to establish a distance education organization; at another level it would precede the decision of which courses to offer. Needs assessment is an on-going process, taking into account the results of formative and summative evaluation.

**Objective:** A statement describing aims in specific, measurable, attainable, realistic, and timed ways. A good learning objective contains one action, the conditions under which the action should be performed and a criterion for its evaluation. While developed by behaviorists and psychologists, learning objectives can be a valuable tool in distance teaching that follows other learning theories.

**Open Enrollment:** The ability to enroll in a course or program of study at any time. Contrasted with the typical term-based enrollment and lock-step cohort programs of traditional schools, "open enrollment" is frequently requested by adult learners. Correspondence courses are traditionally offered as "open enrollment" delivery systems, although logistical issues and faculty concerns (especially workload) often block its implementation.

**Open Enrollment:** an option to attend a school outside the student's regular attendance zone. Usually put into rule, policy, or law by a school district, education agency, or state legislature. (Alternate definition)

**Pedagogy:** A term associated with teaching; specifically teaching children, but currently often used interchangeably with andragogy (teaching of adults).

**Quality Assurance (QA):** "The totality of the arrangements by which an organization discharges its responsibility for the quality of the teaching it offers, satisfying itself that the mechanisms for quality control are effective and promote improvement." (See Inglis, Ling, & Joosten (1999) pp. 161, 200 and Moore & Kearsley (1996) 182-184)

**SCORM:** Sharable Content Object Resource Model. SCORM defines a Web-based learning Content Aggregation Model and Run-time Environment for learning objects and references interrelated technical specifications to bring together diverse and disparate learning content and products to ensure reusability, accessibility, durability, and interoperability.

**Self Study:** Education in which the learner is on their own, studying without interaction with others. Sometimes used to refer to asynchronous modes of delivery. CBT has been the most common form of self-paced learning, but web-based asynchronous systems are catching up quickly. (See self-paced learning)
**Shovelware:** a pedagogically-critical term used when traditional courseware is re-purposed for the internet without full consideration of the quality of the new learning experience. Essentially "shoveling" content onto the internet for better or worse.

**Staff Development:** Various, usually formal, training or activities, funded by employers to enhance the attitudes, knowledge and skills of current employees. (See professional development & workforce development)

**Subject Expert:** (See content expert)

**Summative Evaluation:** A concluding evaluation determining the success of the project - whether or not it met the stated objectives, which may be more than the learning objectives, important though they are. Relevant to accountability and to future projects.

**Synchronous:** A type of two-way communication that occurs with virtually no time delay, allowing participants to respond in real time. Also, a system in which regularly occurring events in timed intervals are kept in step using some form of electronic clocking mechanism. Synchronous capabilities add a living, breathing dimension to online learning. Generally includes tools like web-conferencing, videoconferencing, chat, whiteboards, application-sharing, and question-and-answer. (See also Asynchronous)

**Tutors:** Person assisting learners grasp concepts and complete work in a course. Often not the instructor which performs the summative assessment. (See also "instructors")

**Validity:** Within research and evaluation refers to extent to which what is measured is what is intended to be measured. (See Inglis, Ling, & Joosten (1999) p. 126)

**Voice-over-IP:** (VOIP) Uses the internet to allow phone-like voice interaction over dial-up internet connections. Typically implemented as a browser add-in or external piece of software. Some systems are full-duplex, other Voice-Over-IP systems use "push-to-talk" half-duplex systems.

**Video Conferencing:** In the context of web-delivered learning, refers to "Talking" head, small size video over IP networks. Generally requires additional hardware for implementation. Typically implemented as an optional feature, due to its significant bandwidth requirements.

**Web-based training (WBT):** A form of computer-based training in which the training material resides on pages accessible through the World Wide Web. Typical media elements used are text and graphics. Other media such as animation, audio, and video can be used, but require more bandwidth and in some cases additional software. The terms "online courses" and "web-based instruction" are sometimes used interchangeably with WBT.

**Workgroups:** allows sub-grouping of learners into on-line workgroups. Implementations vary from simply email group lists to virtual voice enabled on-line collaborative workgroups
Appendices

Appendix A – Examples of Statewide Initiatives

Kentucky
http://www.kyvu.org/kyvu/

The Kentucky Virtual Campus (KYVC) is this state's official virtual campus. KYVC is a student-centered, web-based service to support lifelong learning. The KYVC simplifies access to quality college credit, professional development, and supplemental studies. The KYVC provides a single access point to statewide learning support services, including KYVL (Kentucky Virtual Library), thus serving as a seamless transition to higher education for Kentucky citizens. The primary entities connected by KYVC include the statewide virtual college/university clearinghouse (KYVU), the statewide virtual library (KYVL), and the statewide virtual K-12 school (KYVS).

The KYVC also has links to other affiliated initiatives or organizations including the Council on Postsecondary Education (CPE), Kentucky Virtual Adult Education, Kentucky Professional Standards Board, and KVC4K12 (e.g. Support for Title I, GEARUP, Teacher Professional Development etc.), and Kentucky Criminal Justice Training.

Consistent with a statewide strategic agenda for postsecondary education, the primary purposes of the KYVC are to:

- Enhance and expand educational access and increase educational attainment across Kentucky.
- Upgrade workforce skills and expand professional development through basic and continuing education.
- Increase collaboration and foster efficiency and effectiveness in delivering courses and programs.
- Increase global competitiveness of Kentucky’s educational resources.

Given the KYVC’s charge to increase access to, and attainment of, postsecondary educational experiences, the KYVC serves the following primary clients, recognizing, at the same time, that the nature of electronic delivery systems is such that potential users/clients are essentially unlimited:

New Mexico eLearning Plan (2000-2009)
KYVC serves as a clearinghouse for a growing list of online learning opportunities. Kentucky was the first state in the country to offer its residents a comprehensive package of online educational resources: a virtual university, a virtual high school (www.kvhs.org) and a virtual library, including research help from reference librarians (www.kyvl.org).

KYVC is still in the process of evolving out of the Kentucky Virtual University initiative. The range of KYVU’s instructional partners expanded significantly in seven years of operation. Since its original House Bill 1 focus, which stated “the regional universities shall be the primary developers and deliverers of baccalaureate and master's degree programs to be delivered by the Commonwealth Virtual University,” providers from many different instructional sectors have joined KYVU. These include Kentucky’s research universities, the Kentucky Community and Technical College System, independent colleges and universities, Kentucky Adult Education, Education Professional Standards Board, Kentucky Virtual High School, area career and technical schools, support for No Child Left Behind initiatives, the Law Enforcement Training Agency, and the Office for Employee and Organizational Development. In short, KYVU came to serve Kentucky’s citizens as a portal to many types of credit and noncredit secondary, postsecondary education, and workforce development opportunities from academic institutions and state agency providers.

A recent SACS report included a recommendation that the KYVU’s name be changed to reflect more accurately its expanded constituencies and mission. A broad range of alternative names was suggested and considered, including a review of the naming conventions of 53 other virtual postsecondary education entities from across the country. The name recommended by the Distance Learning Advisory Committee to best communicate the expanded scope of distance learning opportunities and to leverage existing image awareness is “Kentucky Virtual Campus.” This new name retains much of the previous branding and maintains a close link with KYVU’s postsecondary education vision to create a technology-supported, lifelong learning environment that results in improve the lives of Kentucky citizens. The CPE approved the strategic plan and the name change at subsequent meetings.

The executive summary of the strategic plan approved by the Council ensures that Kentucky Virtual Campus will play a vital, symbiotic, and significant role in supporting Kentucky’s eLearning ecosystem and in meeting the goals of the public agenda. KVC contributions will center on its roles as an advocate, creating awareness of and expanding access to learning via eLearning, as a convener of partners leveraging resources and fostering collaborations, and a catalyst informing planning and decision-making and incubating eLearning innovation and excellence.
The Florida Virtual School (FLVS), whose motto is “anytime, any place, any path, any pace,” grew out of a state-level “Break the Mold” grant. The threefold aim was to relieve the strain of overcrowded schools in the fast-growing Florida districts; to meet the demands for high-needs courses; and to make advanced courses available to students throughout the state’s 32 rural districts.

FLVS, a state-funded institution, was founded in 1997, and often reported as one of the most successful state-funded eLearning initiatives. FLVS now has over 80,000 student course completions (.5 credit), estimates over 46,000 students served, and employs over 150 full-time and part-time teachers (FLVS, 2006). Experienced teachers monitor the progress of all students and are available to students by telephone or e-mail.

Ninety-seven percent of the school’s students take only one or two courses to fill a need not met in their own schools. Minorities make up some 30 percent of enrollment. The students come from public schools (72 percent), home schools (21 percent), and private or charter schools (7 percent). The majority of students are from Florida, but there are students from many other states and even as far away as Shanghai.

<table>
<thead>
<tr>
<th>Year</th>
<th>FLVS Virtual School Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-97</td>
<td>77</td>
</tr>
<tr>
<td>97-98</td>
<td>277</td>
</tr>
<tr>
<td>98-99</td>
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<td>25,615</td>
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<tr>
<td>05-06</td>
<td>55,883</td>
</tr>
<tr>
<td>06-07</td>
<td>80,862</td>
</tr>
</tbody>
</table>
Ohio
http://www.ohn.org/

Ohio Learning Network, started in 1999, is Ohio's premiere eLearning site that which aggregates services and resources so Ohioans can meet their learning potential, Ohio's economy can grow, and Ohio colleges and universities can continue to be knowledge leaders. OLN helps Ohioans find educational programs that meet their needs, works with colleges and universities using technology to improve teaching and learning, and helps build partnerships among higher education, schools, businesses, and communities.

The Ohio Learning Network was established by the Board of Regents in 1999 to assist colleges and universities as they prepare for the Knowledge Economy by providing educational technologies, faculty development, and statewide shared resources. A consortium of 81 member institutions, OLN is respected by its members. In a survey of its member institutions, 96% found OLN's resources helpful to daily work, 86% believed OLN is a successful organization, and 72% believed that OLN is a catalyst for change.

In the past eight years, OLN has:

- created an online catalog of 198 degrees and certificates and 4100 courses used by more than 350,000 Ohioans annually
- jump-started 300 adults into online learning with E 4 ME, an online course with no fault, no fail guarantees. Ohioans who complete the course are assigned an E Guide to assist with transition to college and can use their certificate of completion for reduced admissions or enrollment fees at selected Ohio colleges
- funded nearly $6 million in grants for collaborative course and degree development resulting in 28 new programs available at a distance
- supported 120 Learning Communities from 43 institutions that provide authentic faculty and staff development, are transforming practices on campus and improving learning environments
- developed a web-based clearinghouse of teaching and learning and student support resources used by more than 1000 faculty and administrators
- created a quality framework for faculty to self review online courses ensuring Ohioans have high-quality courses
- worked with hundreds of students to help them find a college "home"
• piloted a shared CMS hosting service on two commercial and two open source platforms, paving the way for a statewide enterprise system that will save thousands in IT and personnel costs
• sponsored an annual statewide conference attended by 400 faculty, staff, and students and consistently rated by more than half of the participants as "the best conference I attended"
• provided statewide discounts up to 25% off the original cost of educational technology software, saving campuses more than $117,000 annually
• aggregated services to provide a 35% discount in cost for online tutoring (Smarthinking), allowing institutions to offer 24 x 7 tutoring to distance learning students
• designed a best practices review for services provided to students at a distance ensuring that accompanying student services are of equal high quality
• helped Ohio higher educational institutions improve their Web-based student services through use of the WCET CENTSS Audit
• funded more than $1 million of faculty development projects in 2000 giving many faculty an early step-up in using technology while also creating new collaborative P-16 programs

OhioLearns! (http://www.ohiolearns.org/) (Part of the Ohio Learning Network) a one stop site for anyone interested in college level distance or eLearning in Ohio. The website has a catalog that lists courses as well as degrees and certificates from Ohio two- and four-year, public and private, higher education institutions. The website also links to other career guidance websites such as hub for students interested in careers in information technology.

To better prepare the potential students for what they need to know to be a successful distance learner, the website has a special section called E 4 ME. This is an online orientation course for distance learning. The potential student learns about distance and eLearning opportunities in Ohio, while test driving a course for free. The course (Explore) is organized to allow systematic review of information, topics, and issues as well as allowing the student to learn more about their learning style(s), so they can be a successful distance learner. This site is comprised of three sections: Get a plan, Get Started and Get Support.

If potential students need help, many online resources are provided. Links to Ohio Learning Network staff, instructors in E 4 ME, and hundreds of connections to Ohio’s higher educational institutions are found throughout the site.

New Mexico eLearning Plan (2000-2009)

The New Mexico Learning Network is the result of a statewide effort that began in 2000 by dedicated educational leaders in New Mexico. These leaders of colleges and universities formed a consortium to provide eLearning education services to the state’s students and residents. These efforts failed to reach the level of success seen in other states due primarily to the absence of recurring resources.

In the fall of 2000, NM Learning Network’s predecessor, the New Mexico Virtual College (NMVC) was launched at a group meeting at San Juan College sponsored by then president Dr. Henderson. NMVC was conceived as a vehicle for coordinating distance education opportunities throughout the state. During the subsequent legislative session, the group sought funding from the state legislators for building the NMVC. While no funding was allocated, legislative memorials were passed supporting the concept.

The New Mexico Association of Community Colleges (NMACC) agreed to manage the NMVC with postsecondary distance education leaders serving as the NMVC management team. Thanks to a small grant and annual membership dues from participating colleges, NMVC was able to develop a minimal web clearinghouse service that provided a portal to students and prospective students throughout the state for finding available distance education courses. The portal was developed by a web development contractor based on input from an NMVC advisory team. Albuquerque Technical-Vocational Institute (now Central New Mexico (CNM) Community College) volunteered to host this portal by providing hardware and applications support. NMVC received funding from the Legislature in 2005. This special appropriation was included as a line item in the New Mexico Higher Education Department 2005-2006 budget. In the fall of 2005, NMVC formed an improvement project team to carry out the work funded by this appropriation. In the spring of 2006 the NMVC contracted out to manage the improvement project and develop a business plan.

At a meeting in May 2006, NMVC members voted to expand its mission to include goals such as building more dual credit pathways between colleges and high schools, providing more economic development opportunities through workforce development, better serving educational needs of the state’s rural communities, and helping serve the state’s goal of greater collaboration and articulation between institutions of higher education. The management team selected the new name “New Mexico Learning Network” to reflect this expanded mission.

Public education in New Mexico has also had prior statewide projects related to eLearning. The New Mexico Virtual School, established legislatively within the Public Education Department, began instruction in January 2001 with initial Advanced Placement (AP) course offerings, and now offers a full high school curriculum developed by an external provider. It has a long-term focus on all K-12 levels (Clark, 2001). No sustained funding was allocated, and the primary approach of utilization of a vendor was not financially scalable and did not build in-state resources, skills, or capacity.
Bibliography


New Mexico eLearning Plan (2000-2009)


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