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September 27, 2010

MEMORANDUM

TO: Legislative Education Study Committee

FR: Peter B. van Moorsel

**RE: STAFF REPORT: INNOVATIVE DIGITAL EDUCATION AND LEARNING
(IDEAL)-NEW MEXICO UPDATE**

The 2010 Legislative Education Study Committee (LESC) Interim Workplan includes a report on the status of the Innovative Digital Education and Learning-New Mexico (IDEAL-NM) initiative.

This staff report includes a review of:

- IDEAL-NM and New Mexico Cyber Academy funding, including the:
 - the FY 11 budget; and
 - appropriation history; and
- The IDEAL-NM structure, including a summary of:
 - the statewide e-learning services center,
 - the statewide e-learning system,
 - the cyber academy and its components related to:
 - course development;
 - course enrollment costs; and
 - training of online teachers; and
 - the higher education and state agency training components of IDEAL-NM.

IDEAL-NM AND NEW MEXICO CYBER ACADEMY FUNDING

In 2007 LESC-endorsed legislation was enacted to establish a statewide cyber academy to provide distance learning courses for grades 6 through 12. That same year, the Legislature appropriated funds to implement IDEAL-NM. Both of these initiatives represent significant steps toward providing New Mexicans with access to online learning resources. Cooperatively administered by the Public Education Department (PED) and the Higher Education Department (HED), these initiatives aim to:

- provide eLearning services to public schools, higher education institutions, and state agencies;
- reduce geographic and other barriers to educational opportunity statewide; and
- increase the computer literacy skills online learners need to participate in a global economy.

FY 11 Budget

The FY 11 IDEAL-NM budget totals approximately \$4.5 million, and delineated below by whether funding flows through PED, HED, or Graduate New Mexico funds¹:

- For PED, the total budget of \$684,440 includes:
 - almost \$323,000, or almost half of the PED budget, for staff salaries and benefits;
 - nearly \$300,000 for contractual services (including \$30,400 for an external program evaluation, \$190,000 in hosting fees, approximately \$37,000 in fees for maintenance software; and \$40,000 for web-conferencing software); and
 - almost \$65,000 in facility lease and other costs.
- For HED, the \$689,800 budget includes:
 - approximately \$340,000 for staff salaries and benefits;
 - \$210,000 for hosting fees and \$27,000 for professional development contracts;
 - Approximately \$113,000 for other costs including the facility lease, transportation, and IT supplies and services.
- The portion of the budget funded by \$3.16 million in Graduate New Mexico funds includes:
 - \$715,000 for staff salaries and benefits;
 - Approximately \$2.2 million for contractual services, including district invoicing, teacher compensation, course development costs, teacher training and professional development, external program evaluation costs, and hosting fees; and
 - 201,000 for other costs including the transportation, and IT supplies and services.

¹ FY 11 IDEAL-NM has budgeted almost \$3.2 million in the Governor's discretionary Government Services Funds that were allocated to the Governor pursuant to the federal *American Recovery and Reinvestment Act of 2009* (ARRA). The Governor awarded a total of \$9.4 million of these funds to the Graduate New Mexico Program, whose goals include recruiting 10,000 dropouts by fall 2011 to earn high school diplomas, improving graduation rates, and closing the graduation and achievement gaps.

Appropriation History

Since 2007, the Legislature has appropriated a total of approximately \$10.6 million for IDEAL-NM to fund the implementation and operation of the program, including:

- \$7.4 million to HED, including:
 - \$6.4 million to implement the IDEAL-NM infrastructure, including licensing fees for a Learning Management System (LMS); and
 - \$1.0 million in the department's budget. However, appropriation reductions in FY 09, FY 10, and FY 11 have reduced the HED portion of IDEAL-NM's budget to almost \$690,000; and
- approximately \$3.2 million to PED, including approximately \$685,000 for the department's FY 11 operational costs.

IDEAL-NM STRUCTURE

The main goal of IDEAL-NM is to establish a common infrastructure for online learning for the project's three main components: P-12 education, higher education, and state agencies. The three main components of this goal are:

- (1) A statewide eLearning services center: This center is the physical location for administrative staff for IDEAL-NM and the cyber academy, including the Executive Director, Chief Academic Officer, Course Development Coordinator, Chief Technology Officer, Help Desk Support Staff, Technical Support Specialists, and Special Projects/Management Staff. It is from this center that IDEAL-NM staff provide support for users of the statewide learning management and web-conferencing systems, including:
 - administrative and technical help desk services for eLearning students, instructors, facilitators;
 - academic services for students;
 - course development;
 - teacher training and professional development;
 - scheduling and management of online courses; and
 - continuing eLearning planning.
- (2) A statewide eLearning system: This system is the infrastructure that supports all aspects of online learning that includes:
 - a Learning Management System (LMS) that manages learning activities through the system's ability to catalog, register, deliver, and track learners and learning, accessible via a web-portal.

In August 2008, HED contracted with Blackboard, Inc. to provide a vendor-hosted statewide LMS for all school districts, charter schools, institutions of higher

education (IHEs), and state agencies. According to IDEAL-NM, the LMS contract includes licensed software and software maintenance, out-of-state hosting services, training of personnel and training materials, integration of Banner (a data management system used by IHEs), functional testing, and consulting services for 200,000 potential online users;

Issue:

IDEAL-NM reports that, during the fall 2009 and spring 2010 semesters, several IHEs² experienced issues with the Blackboard LMS that resulted in a lack of stability and functionality, including access to online courses for users. Examples of problems that were experienced include instances where students were unable to complete coursework or tests online, as well as instances where faculty were unable to instruct courses or complete grading in online environments. IDEAL-NM reports that these issues were the result of the shared by multiple IHEs of one database of Vista (an older version of Blackboard, and formerly WebCT).

According to IDEAL-NM, the issue was resolved over the summer when the Blackboard contract was amended to allow each IHE to migrate from the shared database of Vista to an individual database. IDEAL-NM adds that the LMS at the affected IHEs has been functional for the start of the fall 2010 semester.

IDEAL-NM further reports that, as the affected IHEs migrate to the newer version of Blackboard (Learn 9.1), they will have the choice to migrate to individual databases, and will not have to migrate into the shared Blackboard database where state agencies and K-12 are housed.

LESC staff contacted representatives of the affected institutions to verify whether the amended Blackboard contract and the subsequent migration to separate instances have led to a resolution of the above functionality issues. The institutions reported that, since the changes over the summer, the Blackboard LMS had been functional. Given the problems with the LMS in the past, some representatives expressed a lack of confidence in the stability of the Blackboard LMS. One staff member noted that, while some functionality issues remain, these occurrences are random and rare.

However, the responses of the majority of the staff contacted at the IHEs were positive, and cited:

- improved relationships with IDEAL-NM staff;
- improved response time from Blackboard in cases of requests for technical support; and
- increasing student enrollment in distance learning courses.

² Clovis Community College; Eastern New Mexico University; Luna Community College; New Mexico Highlands University; New Mexico Institute of Mining and Technology; New Mexico Junior College; Northern New Mexico College; and Western New Mexico University.

- The e-learning system also includes a web-portal at www.IDEAL-NM.org that allows access to IDEAL-NM, and features links for P-12 online learning, higher education online learning, and state agency online training.

Through this web-portal, school districts, IHEs, and state agencies can create their own portals within the learning management system. IDEAL-NM reports that to date, 40 school districts and 12 charter schools have created their own portals:

- a web-conferencing system that enables learners and instructors to interact face to face. IDEAL-NM reports that, because each program offers different capabilities, four types of web-conferencing software are included among the shared resources available through the Blackboard LMS;
- a help desk system that allows users to receive online user support. HED has purchased help desk software called SysAid from Ilient, a provider of IT management solutions. The software records calls to the help desk and creates status reports that track IDEAL-NM staff support; and
- hosting centers that are intended to be the physical locations of the technology to support online learning. However, PED and HED have not yet implemented these centers because they lack the funding to purchase and install them; and the IDEAL-NM learning management system remains hosted by the vendor, Blackboard, Inc., rather than at in-state sites.

(3) A cyber academy serving grades P-12 statewide. For this component, PED reports that:

- in school year 2007-2008, the cyber academy operated as a pilot program that offered 53 courses purchased from an online course vendor, and two courses developed in New Mexico;
- in school year 2008-2009 the cyber academy officially opened, and offered a larger selection of self-developed courses than was offered in the pilot;
- during school year 2009-2010, students enrolled in 2,240 courses, including 544 in the summer. IDEAL-NM reports that virtual school students pass 91 percent of the online courses in which they enroll;
- as of September 9, 2010, virtual school students had enrolled in 769 online courses for the fall 2010 semester; and
- since the opening of the New Mexico Cyber Academy, students from 72 school districts, 26 charter schools; three juvenile justice system schools, two Bureau of Indian Education schools, and six private schools have enrolled in cyber academy courses.

Course Development

According to PED, 59 courses have been developed, and an additional five courses are currently in development (see Attachment, *Courses Developed by the New Mexico Cyber Academy*). PED reports that the average cost to develop a cyber academy course is approximately \$7,200, including the costs of:

- developing the course content;
- uploading the course content onto Blackboard;
- purchasing additional course content for inclusion in self-developed courses from the National Registry of Online Courses (NROC); and
- purchasing modular, interactive simulations to be used in courses.

IDEAL-NM cites two advantages to the statewide cyber academy's developing, housing, and maintaining its own courses. One is that the cyber academy can use the same course in multiple semesters and school years without having to pay the fees charged by online course vendors. According to PED, once a course is developed, it would only require periodic revision to ensure that the course content is updated and other online features remain accurate and functional, at a cost of approximately \$1,200 every three years. Another advantage of course ownership is greater control over course content, allowing the cyber academy to ensure that the online courses are aligned with the state's academic performance standards as required by state statute.

Course Enrollment Costs

All school districts and charter schools have access to the developed course materials at no cost. A teacher within the school district may teach the state-developed course, or use all or part of the state-developed course material in developing, designing, or supplementing that teacher's courses. To enable access to these courses through the eLearning portal, school districts and charter schools enter into a memorandum of understanding (MOU) with PED. Among its provisions, the MOU permits the school districts to use and modify course material for its own use, but prohibits the school district from selling any course from IDEAL-NM's course catalogue.

The main cost of school district or charter school participation in the cyber academy, should that district or school not use its own teachers, is the eTeacher's salary. School districts do not pay eTeachers extra for courses that they teach via the cyber academy. Rather, IDEAL-NM contracts with the eTeachers, who are paid a per-student fee for each semester-long course that they teach via the cyber academy.

According to IDEAL-NM, school districts must pay \$200 per semester seat (equivalent to one student enrolled in one semester-long class) to cover the eTeacher and other support costs.

In setting the cost of \$200 per semester seat, HED and PED based their estimate on the average returning teacher salary, the average number of classes taught per year, and the average number of students per class, as follows:

Average Returning Teacher Salary	\$59,000
Divided by the average number of classes taught per year (10)	\$5,900
Divided by the average number of students per class (30)	\$197
Estimated (Rounded) Cost	\$200

Training of Online Teachers

The requirement in the federal *No Child Left Behind Act of 2001* (NCLB) that all teachers of core academic areas be highly qualified applies to teachers of online courses as well as to teachers of traditional courses. Thus, the *Statewide Cyber Academy Act* requires that all online courses be taught by highly qualified teachers or, in the case of dual credit courses, by members of the faculty of accredited postsecondary educational institutions. According to IDEAL-NM, the cyber academy recruits highly qualified teachers statewide through its web-portal and via announcements sent out to school districts. To be able to teach in the cyber academy, a prospective eTeacher must:

- be highly qualified to teach in the state of New Mexico with a teaching endorsement that corresponds to the content area being taught; and
- have experience as an online learner.

According to IDEAL-NM, a total of 175 eTeachers have been trained, and 79 of these have taught courses in the cyber academy.

PED reports that eTeachers must complete the IDEAL-NM/Regional Educational Technology Assistance (RETA) eTeacher Training or equivalent training aligned with the online teaching standards developed by the North American Council for Online Learning (NACOL) to prepare eTeachers in both the pedagogical aspects of quality online teaching and the technical aspects of teaching within the Blackboard LMS.

Following the initial eTeacher training, eTeachers must:

- engage in a minimum of 16 hours each year of professional development activities specific to online teaching; and
- submit an annual professional development report that summarizes their professional development activities and identifies how knowledge gained in those activities has been applied to their teaching.

HIGHER EDUCATION AND STATE AGENCY TRAINING

Higher Education

Because institutions of higher education have used online education prior to the implementation of IDEAL-NM, they have developed libraries of online courses and programs of study. IDEAL-NM's statewide software license for the LMS provides IHEs with free access to an online environment through which it can conduct online learning. In addition, IDEAL-NM provides higher education students with additional services through the Higher Education link of the web-portal:

- The web-portal provides a catalog and a schedule of online courses offered online, as well as links to the colleges and universities providing these courses, some of which currently deliver courses through the IDEAL Blackboard LMS.
- The course catalog identifies the IHE providing the online course and provides other course information, including prerequisites, course schedules, course level, credit status and number of credits, delivery method, and instructor.
- In addition to the course catalog, higher education link of the IDEAL-NM web-portal provides information on available programs of study, listed by the type of program, including certificate: associate, bachelor's, master's, and doctoral programs, and identifies the college or university offering the program.

State Agency Training

IDEAL-NM calls for the development of online courses to be used by New Mexico governmental agencies for staff training. Among the advantages to this development are:

- reduced employee travel time and associated costs;
- expanded training opportunities; and
- self-paced instruction and flexible scheduling.

IDEAL-NM reports that the New Mexico State Personnel Office and the Human Services Department (HSD) have conducted an initial collaborative meeting of the State Trainers Network, comprising state agencies and departments, who intend to use IDEAL-NM's online course delivery model for agency training.

IDEAL-NM reports that it will provide a state agency training plan, and develop an Online Developers Certification Course (ODCC). According to IDEAL-NM, approximately 10-15 state agency participants will be selected to pilot the ODCC in March 2011. This course will be comprised of a 6-8 hour face-to-face session, followed by an 8-week online course aimed to introduce users to the Blackboard LMS, and train participants in:

- knowledge and skills of adult learning principles;
- online pedagogy;
- building social presence in an online community;
- instructional design principles;
- distance education learning theory; and
- course development.

The agencies that IDEAL-NM reports are current participants in the State Trainers Network are identified below:

Children, Youth and Families Department	Department of Health
NM Department of Transportation	NM Department of Workforce Solutions
Human Services Department	NM Corrections Department
NM Transportation Department	Public Education Department
NM Taxation and Revenue Department	Regulation and Licensing Department
Commission for Deaf and Hard of Hearing	Department of Vocational Rehabilitation
Aging and Long Term Services Department	Department of Information Technology
EXPO	Commission on the Status of Women
Office of State Engineer	NM State Personnel Office

COURSES DEVELOPED BY THE NEW MEXICO CYBER ACADEMY**Science**

Astronomy
 Biology
 Chemistry
 Earth Science (6th grade)
 Environmental Science
 Geology
 Introduction to Cell Biology
 Life Science (7th grade)
 Nanoscience*

Math

Math Refresher
 Pre-Algebra
 Algebra 1
 Algebra 2
 Geometry
 Pre-Calculus
 Fractal Math*
 Consumer Math
 Trigonometry*

Advanced Placement

AP Environmental Science
 AP Calculus
 AP US History & Geography
 AP US Government & Politics
 AP Biology

Language Arts/Languages

English 1 (Freshman)
 English 2 (Sophomore)
 Honors English 2 (Sophomore)
 English 3 (Junior)
 English 4 (Senior)
 Creative Writing*
 Grammar & Composition*
 Language Arts (8th grade)
 Language Arts (7th grade)
 French 1
 French 2
 Spanish 1
 Spanish 2
 Spanish 3

Social Studies

Economics*
 New Mexico History*
 U.S. Government*
 U. S. History & Geography
 World History & Geography
 Physical Science Physics Physics (Honors)

Fine Arts & Electives

ACT/SAT Preparation*
 Art Appreciation
 Career Exploration*
 Computer Fundamentals
 Creative Art
 Digital Photography
 Entrepreneurship*
 Financial Literacy*
 Fitness Fundamentals*
 General Business*
 Health & Personal Wellness*
 Media Literacy*
 Psychology
 Driver's Education*

Courses Under Development

Social Studies (7th Grade)
 Social Studies (8th Grade)
 Science (8th Grade)
 Family and Consumer Sciences
 Fitness Fundamentals (Semester 2)
 AP English Literature and Composition
 AP Spanish
 AP French
 AP Computer Science
 AP Economics
 AP Psychology
 German
 Financial Literacy (Math)