

**LB 689**

**Distance Education Enhancement  
Task Force**

**December 31, 2005**

**Task Force Members**

**Senator Ron Raikes, Education Committee Chair**  
**Senator Elaine Stuhr, Education Committee Member**  
**Senator Tom Baker, Transportation and Telecommunications Committee Chair**  
**Senator Don Pederson, Appropriations Committee Chair**  
**Lt. Governor Rick Sheehy, Nebraska Information Technology Commission**  
**Eric Brown, Nebraska Information Technology Commission**  
**John Heil, Nebraska Educational Telecommunications Commission**  
**Jerry Vap, Public Service Commission**  
**Brenda Decker, Governor's Representative**  
**Mike Kozak, Department of Education**  
**Al Schneider, Educational Service Units**  
**Nigel Buss, Distance Education Consortia**  
**Daniel J. Hoelsing, Superintendent**  
**Michael J. Cunning, Superintendent**  
**John Horvath, Postsecondary Education**  
**Jack Huck, Postsecondary Education**

**Task Force Staff Group**

Tammy Barry, Education Committee  
Kris Valentin, Education Committee  
Jill Becker, Transportation and Telecommunications Committee  
Jessica Kolterman, Senator Stuhr's Office  
Mikki McCann, Senator McDonald's Office  
Ron Theis, Senator Schrock's Office  
Tami Soper, Senator Howard's Office  
Janet Anderson, Senator Byars' Office  
Kathy Tenopir, Legislative Fiscal Office  
Sandy Sostad, Legislative Fiscal Office  
Phil Hovis, Legislative Fiscal Office  
Tom Rolfes, Nebraska Information Technology Commission  
Mike Beach, Nebraska Educational Telecommunications Commission  
Wayne Fisher, Department of Education  
Alan Wibbels, Educational Service Unit 10  
Rick Golden, University of Nebraska

## Table of Contents

Table of Contents .....	1
Executive Summary of Distance Education Improvement Plan.....	2
Distance Education Improvement Plan.....	3
Distance Education Improvement Plan: Fiscal Analysis .....	8
Background .....	9
Network and Equipment .....	10
Organization and Coordination.....	11
Finance .....	12
Teacher Training and Other Services .....	14
Appendix A: The Formation of Distance Learning Consortia in Nebraska and Map of E.S.U.'s with Distance Learning Pod Boundary Overlay.....	15
Appendix B: Legislative Bill 689 – Slip Law, Committee Statement, Final Fiscal Note, Original Fiscal Note.....	22
Appendix C: Distance Education Enhancement Task Force Membership, Objectives, and List of Presenters.....	31
Appendix D: Chronology of Nebraska Educational Telecommunications Events.....	37
Appendix E: Map of Network Nebraska .....	41
Appendix F: Nebraska Information Technology Commission Video Standards .....	43
Appendix G: High School, Dual-Enrollment, and Postsecondary Distance Education Courses.....	49
Appendix H: Lottery Proceeds to the Education Innovation Fund.....	85
Appendix I: State Aid Technology Allowance Example.....	87
Appendix J: E.S.U. Funding .....	89
Appendix K: Instructional Technology Offerings in Teacher Education Programs.....	94
Appendix L: Glossary of Telecommunications Terms .....	99

## **Executive Summary of Distance Education Improvement Plan**

The Distance Education Improvement Plan provides for statewide connectivity and coordination for distance education in Nebraska. The plan will rely on voluntary participation in an expansion of Network Nebraska. A new Distance Education Council comprised of E.S.U. administrators or their representatives will coordinate distance education among school districts. The interlocal agreements forming distance education consortia will be terminated and responsibility for distance education services will rest with educational service units (E.S.U.'s). Incentives and equipment reimbursements will be offered to school districts choosing to participate in both Network Nebraska and statewide coordination through the Distance Education Council. Payment for purchasing distance education courses from other school districts or educational institutions will be negotiated among the entities involved. The school finance formula and budget limits will be modified to reflect some distance education costs, receipts, reimbursements, and incentives.

## Distance Education Improvement Plan

The improvement plan developed by the Distance Education Enhancement Task Force is centered on three general principles. First, the plan recognizes school district, educational service unit (E.S.U.), and public postsecondary education institution responsibility for making decisions related to participation in distance education. Second, the plan encourages the exchange of distance education courses using a statewide network, currently known as Network Nebraska. Third, the plan provides for statewide coordination through a new entity, to be called the Distance Education Council. The plan would be implemented as follows:

- The Nebraska Chief Information Officer will arrange for all school districts, E.S.U.'s, and public postsecondary education institutions to have the opportunity to link to Network Nebraska at the earliest available opportunity.
  - Private not-for-profit educational institutions will be allowed to participate according to the cost structure established by the Chief Information Officer based on actual costs plus administrative expenses.
- The Chief Information Officer will also bid for equipment (hardware and software) related to distance education, which meets at least minimum standards as set by the Nebraska Information Technology Commission (N.I.T.C.) for school districts, E.S.U.'s, and public postsecondary institutions who want to participate in statewide leasing and/or purchasing contracts.
  - The Chief Information Officer will need additional staff funded through administrative fees collected from participating entities to coordinate the expanded network and equipment contracts.
  - School districts and E.S.U.'s will be eligible to receive one-time equipment reimbursements of up to \$20,000 from lottery funds beginning in the first year of participation in Network Nebraska and ending June 30, 2013.
    - School districts receiving the reimbursements will be required to participate in distance education by either sending or receiving two-way interactive video courses each semester, or the equivalent of two semester courses each year, for four years. To qualify, the courses must be coordinated through the new Distance Education Council and shall have at least one participating student who is enrolled in and attending a school district that is not generating the course. Failure to participate at the required level will result in a forfeiture of the funds.
- The interlocal agreements forming each distance education consortium will terminate on June 30, 2007, and all assets and liabilities (including staff) of each

consortium will be transferred to the E.S.U. chosen by a majority of the superintendents of the consortium member school districts.

- E.S.U.'s would act as fiscal agents for distance education and coordinate funding sources with core service and technology infrastructure funding.
- Participating districts would be charged by the E.S.U. for the distance education program of services transferred from consortia.
  - A one time budget exception for school districts would accommodate the distance education program of services transferred from consortia that would no longer be exempt from the budget limitations.
- The current authorization for interlocal agreements among E.S.U.'s would continue, allowing E.S.U.'s to contract with other E.S.U.'s to fulfill the distance education responsibilities for some or all of their member districts.
- An alternative to the June 30, 2007 termination date would be to terminate each distance education consortium when the existing contract with the private telecommunications company serving the distance education consortium is renegotiated to extend the term, the contract is materially altered, any party to the contract defaults, the contract ends for any other reason, or on August 30, 2012, whichever comes first.
- The Distance Education Council will be composed of E.S.U. administrators, or their representatives, and will provide statewide coordination for K-12 distance education courses and dual enrollment courses.
  - If there is not a member of the Distance Education Council in the membership of either the N.I.T.C. or the Technical Panel of the N.I.T.C., the N.I.T.C. will be required to have a member of the Distance Education Council on any ad hoc technical advisory group or workgroup that establishes, coordinates, or prioritizes needs for education.
  - Coordination will include, but not be limited to:
    - Access to lists of distance education course offerings;
    - Access to school schedules for participating school districts;
    - Facilitation of distance education course scheduling;
    - Brokering of distance education courses and dual enrollment courses to be purchased by school districts or private not-for-profit

elementary and secondary schools contracting with Network Nebraska;

- Pricing for distance education courses would be determined by the provider.
- Assessment of distance education needs and evaluation of distance education services;
- Compliance with technical standards as set forth by the Nebraska Information Technology Commission and academic standards as set forth by the Department of Education related to distance education; and
- Scheduling and prioritization for access to Network Nebraska by school districts, E.S.U.'s, and private not-for-profit elementary and secondary schools contracting with Network Nebraska;
  - The Council shall provide scheduling software or scheduling services meeting any standards established by the Nebraska Information Technology Commission;
  - A system shall be established by the Council for prioritizing courses if the network reaches capacity and for choosing receiving sites when the demand for a course exceeds the capacity as determined by either the technology or the course provider.
- Council purchases of hardware and software related to distance education in excess of \$10,000 will need to be approved by the Technical Panel of the N.I.T.C. as being in compliance with N.I.T.C. standards.
- Coordination will be limited to entities participating in Network Nebraska and using Network Nebraska for the exchange of the distance education course offerings, except that access to the list of coordinated course offerings will be available to all Nebraska residents.
  - Private not-for-profit elementary and secondary schools and postsecondary education institutions (for dual enrollment courses) will be included in coordination services if the costs of participation are paid by the school or institution and the school or institution is participating in Network Nebraska.
  - Access to the Council's coordination services will also be offered to other public entities participating in Network Nebraska on a contractual basis.

- The Distance Education Council will coordinate with E.S.U.'s and postsecondary education institutions to provide assistance for:
  - Instructional design for both two-way interactive video and internet based distance education courses; and
  - The offering of graduate credit courses in distance education.
- The Distance Education Council may also administer, or delegate the administration of, learning management systems that are in compliance with N.I.T.C. standards. The administration of learning management systems would be funded by school districts choosing to participate.
- The Distance Education Council may require a state appropriation to fund required personnel, purchased products or services, and coordination activities and may receive additional funds from E.S.U.'s, participating school districts, and other contracting entities.
- A technology allowance will be added to the Tax Equity and Educational Opportunities Support Act for access and transport charges equal to 85% of the local system costs minus federal reimbursements from the E-rate program.
- Payment for purchasing courses will be negotiated between the educational entities involved and receipts for courses shared through the Distance Education Council will be excluded from accountable receipts in the state aid formula and from the budget limitations.
- A technology allowance will be added to the minimum allocation in the E.S.U. infrastructure funding formula for access and transport charges equal to 85% of the E.S.U. costs minus any federal reimbursements from the E-rate program.
- Incentives for school districts and E.S.U.'s sending or receiving distance education courses will be funded with lottery funds through the 2015-16 school year and be administered by the Department of Education.
  - The formula for the incentives will be based on:
    - 1 unit for sending a one semester (or the equivalent) distance education course that is either a two-way interactive video course or an internet based course offered for high school credit and coordinated through the Distance Education Council;
    - 1 unit for receiving a one semester (or the equivalent) distance education two-way interactive video course offered for high school credit and coordinated through the Distance Education Council, including dual enrollment courses; and

- 1 additional unit for sending a one semester (or the equivalent) distance education two-way interactive video course offered for high school credit and coordinated through the Distance Education Council to at least one sparse or very sparse local system.
- The available lottery funding would be divided by the number of units to determine the incentives per unit, up to \$1,000 per unit.
- The data for determining incentives will be collected from the annual curriculum reports submitted to the Department of Education and may be verified by the Distance Education Council. There would also be an appeals procedure for school districts that were denied incentives.
- The incentives will be excluded from the accountable receipts in the state aid formula and there will be an exception to the budget limitations.
- The incentives will be paid one year in arrears.

## Distance Education Improvement Plan: Fiscal Analysis

### Estimated State Expenditures for the Distance Education Improvement Plan

	<u>Plan Component</u>	<u>FY2006-07</u>	<u>FY2007-08</u>	<u>FY2008-09</u>	<u>FY2009-10</u>
Aid	Network Transport Expense	0	0	Unknown increase in state aid*	Unknown increase in state aid*
Aid	Technology Allowance - Schools  - ESU's	0	0	Shift state aid among schools  Shift state aid among ESU's	Shift state aid among schools  Shift state aid among ESU's
Aid	Equipment Reimbursement - Schools & ESU's	3,000,000 GF**	1,580,000 CF	1,620,000 CF	0
Aid	Budget Lid Exceptions - Schools	0	0	Unknown increase in state aid	Unknown increase in state aid
Aid	Accountable Receipts Exemptions - Schools	0	0	Unknown increase in state aid	Unknown increase in state aid
Aid	Incentives - Schools & ESU's	500,000 GF**	2,920,000 CF	2,880,000 CF	4,500,000 CF
Aid	Distance Education Council Aid - ESU's - Staff & Operating Expenses - Scheduling System Software - Scheduling System Maintenance	191,400 GF 492,000 GF 30,750 GF	188,300 GF 264,000 GF 78,000 GF	195,100 GF 252,000 GF 112,700 GF	202,300 GF 0 126,000 GF
Oper.	Chief Information Officer Staff & Operations - DAS	Unknown increase CF/RF***	Unknown increase CF/RF***	Unknown increase CF/RF***	Unknown increase CF/RF***
Oper.	Dept. of Education Operations - NDE	Minimal	Minimal	Minimal	Minimal
	<b>General Funds</b>	<b>4,214,150 GF</b>	<b>530,300 GF</b>	<b>559,800 GF</b>	<b>328,300 GF</b>
	<b>Cash Funds</b>	<b>0 CF</b>	<b>4,500,000 CF</b>	<b>4,500,000 CF</b>	<b>4,500,000 CF</b>
	<b>Total Funds</b>	<b>4,214,150</b>	<b>5,030,300</b>	<b>5,059,800</b>	<b>4,828,300</b>

\* Schools opting to participate in statewide synchronous video course sharing will have increased transport costs via Network Nebraska. It is projected there will also be increased transport costs related to system technology upgrades as well as the elimination of the impact of the buy-down provision in existing contracts. Increased school district expenditures for transport costs will increase state aid, two years later. Vendor contracts and school participation will determine the amount of increase.

\*\* Proposal uses lottery funds for equipment reimbursements and incentives. A general fund fiscal impact is shown because lottery proceeds, pursuant to current law, are deposited in the General Fund in FY07.

\*\*\*Increased staff for management of the expanded network will likely increase administrative charges to users of the network.

## Background

Nebraska established a reputation for being a leader in distance education in the early 1990's. As a state with a wide variety of school districts, including some very remote districts serving sparsely populated areas, distance education makes sense. From 1989-1996, Nebraska offered a multi-state Japanese program that continues to stand as a model for enhancing education through distance technologies. In 1992, the first distance education consortium, also known as a pod, was activated to allow the exchange of classes within a region of the state. Since then, lottery funding and other grants have assisted in providing the opportunity for every school district in the state to join a consortium. For more information about distance education consortia, see Appendix A.

In the fall of 2004, it came to the attention of the Legislature that the existing contracts between the consortia and the private telecommunications companies were beginning to expire, and that new equipment was going to be required in order to continue distance education. The existing equipment in much of the state uses a technology that is no longer being supported by the original manufacturers. Furthermore, updating equipment could offer the opportunity for statewide course exchanges.

Two bills were introduced in January of 2005 to address the issue of the expiring contracts and the expanded possibilities for distance education. Legislative Bill 467 was introduced by Senator Byars on behalf of the Department of Education to create the Creating Essential Educational Opportunities for All Students Act. Included within the Act was an intent to appropriate \$10 million annually beginning with the 2005-06 fiscal year to be disbursed for purposes related to distance education. The measure is being held by the Education Committee at the time of this report.

Legislative Bill 689 was introduced by Senator Stuhr and co-sponsored by Senator Raikes to develop an improvement plan to upgrade and coordinate distance education in Nebraska. The proposal was amended and adopted by the Legislature and approved by the Governor. The Distance Education Enhancement Task Force is submitting this report as a result of that measure. The slip law, committee statement, final fiscal note, and initial fiscal note for L.B. 689 are contained in Appendix B.

The Distance Education Enhancement Task Force was appointed by the Executive Council of the Legislature and the Governor and began meeting monthly in July of 2005. The meetings included speakers to provide background material and discussion of alternatives to implement the objectives for the plan as laid out in the legislation. The membership of the Task Force, the mission listing the objectives of the Task Force, and the list of presenters are contained in Appendix C.

For a chronology of educational telecommunications events, see Appendix D.

## Network and Equipment

Objectives 1, 2, and 3 of the Task Force were directed toward establishing a statewide network and replacing outdated equipment. Those objectives were:

1. Development of a high capacity, scalable telecommunications infrastructure;
2. Development of an Internet protocol-based network to interconnect all existing and future distance education and videoconferencing facilities; and
3. Upgrades of current telecommunications equipment.

The Distance Education Improvement Plan relies heavily on the Nebraska Chief Information Officer and the existing statewide telecommunications backbone, known as Network Nebraska, to accomplish these objectives. Under the plan, the Chief Information Officer would arrange for all school districts, Educational Service Units (E.S.U.'s), and public postsecondary education institutions to have the opportunity to link to Network Nebraska at the earliest available opportunity, with private not-for-profit educational institutions being allowed to participate according to an established cost structure. The Chief Information Officer would also be tasked with bidding for equipment for school districts, E.S.U.'s, and public postsecondary institutions who want to participate in statewide leasing and/or purchasing contracts.

Network Nebraska is a series of contracts with telecommunications companies that provide a multi-purpose scalable transport backbone for use by state agencies, education institutions, and health care entities. The network was developed as a cooperative effort between the University of Nebraska and the State of Nebraska to aggregate bandwidth and reduce costs for participants. It is a network that is currently able to carry Internet1 and Internet2 traffic. The plan would call for the capacity of the network to be expanded in order to allow two-way interactive distance education courses to be exchanged across the state. For a map of the current backbone, see Appendix E.

As current contracts with the telecommunications companies expire, the leased distance education equipment will need to be replaced. Generally, there are at least three items required to provide distance education in the future. Typically, each building will need a new building switch, router, and Codec. The building switch and router will be used to route telecommunications signals to the correct location and application. The routing becomes necessary as the new technology allows multiple applications to travel down the same fiber connections. This advancement will also allow the exchange of courses statewide, instead of limiting exchanges to regional consortia. The Codec is the device that completes the conversion between the digital signal and the video display or input.

The plan includes up to \$20,000 in equipment reimbursements for school districts and E.S.U.'s participating in Network Nebraska. School districts would also be required to send or receive courses coordinated by the Distance Education Council for four years. The estimated equipment cost is \$25,000 per site. The N.I.T.C. video standards that would apply to equipment purchases are included in Appendix F.

## Organization and Coordination

Objectives 5, 6, and 9 of the Task Force were centered around the coordination of distance education. Those objectives were:

5. The transfer of distance education coordination responsibilities from distance education consortia to educational service units by July 1, 2007;
6. Statewide coordination for distance education offerings; and
9. Establishment of a system that allows districts to purchase quality distance education offerings from other school districts either directly or with E.S.U.'s acting as fiscal agents.

To comply with statutory requirements, the Distance Education Improvement Plan would terminate the interlocal agreements forming each consortium on June 30, 2007. All assets and liabilities, including staff, would be transferred to the E.S.U. chosen by a majority of the member school districts. The plan also offers an alternative to the June 30, 2007 termination date. The alternative would allow each consortium to continue until the existing contract with the telecommunications company servicing the consortium is renegotiated to extend the term, the contract is materially altered, any party defaults, or the contract ends for any other reason. If none of these events has occurred, the consortium would terminate on August 30, 2012.

The E.S.U.'s would act as fiscal agents and coordinate distance education funding, including core services and technology infrastructure funds. Participating districts would continue to pay for distance education services. A budget exception would accommodate charges that have been outside the budget limitations due to inter-local agreements.

A Distance Education Council composed of E.S.U. administrators, or their representatives, would provide statewide coordination for elementary and secondary courses, dual enrollment courses, and learning management systems. The Council would provide lists of course offerings, school schedules for participating districts, and facilitation of course scheduling. The Council would also be responsible for scheduling and prioritization for K-12 access to Network Nebraska using scheduling software or scheduling services. Additional responsibilities would include assessment of distance education needs, instructional design assistance, and compliance with technical and academic standards related to distance education.

The Distance Education Council would receive a state appropriation and would also be authorized to receive funds from E.S.U.'s, participating school districts, and other contracting entities. Services of the Council would be limited to entities participating in Network Nebraska, but could be purchased by private not-for-profit educational institutions and other public entities that participate in the network. The Council would assist with the brokering of courses, but the pricing would be determined by the providers. See Appendix G for information on high school, dual-enrollment, and postsecondary distance education offerings.

## Finance

Objectives 7 and 8 of the Task Force were focused on financing for distance education. Those objectives were:

7. Identification of potential funding sources; and
8. Establishment of an equitable and affordable financing system for both equipment and usage.

The financing system developed by the Task Force aligns with the basic principle that school districts, educational service units (E.S.U.'s), and public postsecondary education institutions have the responsibility for making decisions related to participation in distance education. The plan relies on incentives, recognition of costs in the state aid formula, and budget exceptions to encourage participation.

Two components in the incentive package would be financed from lottery funds. The plan includes up to \$20,000 in equipment reimbursements for each school district and E.S.U. that choose to participate in Network Nebraska. School districts are also required to provide or receive two-way interactive video courses offered for high school credit for the equivalent of two semesters each year for four years. The reimbursements would be available beginning with the first year of participation in Network Nebraska and ending June 30, 2013. The costs for equipment are estimated to be approximately \$25,000 per site.

The other component of the incentive package is based on sending or receiving distance education courses and will be funded through the 2015-16 school year. The formula for the incentives would be based on:

1. 1 unit for sending a one semester (or equivalent) course that is either two-way interactive video or internet based, offered for high school credit, and coordinated through the Distance Education Council;
2. 1 unit for receiving a one semester (or equivalent) two-way interactive video course offered for high school credit and coordinated through the Distance Education Council; and
3. 1 additional unit for sending a one semester (or equivalent) two-way interactive video course offered for high school credit to at least one sparse or very sparse local system.

The available lottery funding would be divided by the number of units to determine the incentives per unit, up to \$1,000 per unit. The incentives would be excluded from the accountable receipts in the state aid formula and there would be an exception to the budget limitations. Due to data availability, the incentives would be paid one year in arrears. An analysis of lottery proceed distributions is contained in Appendix H.

School districts could also benefit from selling their courses to other school districts. Payment for purchasing courses would be negotiated between the educational entities involved. Receipts for courses shared through the Distance Education Council would be excluded from accountable receipts in the state aid formula and from the budget limitations.

There are differences in the access and transport costs that disproportionately impact the districts that have the greatest need for distance education opportunities. To minimize those differences, a technology allowance would be added by the plan to the Tax Equity and Educational Opportunities Support Act equal to 85% of the local system access and transport charges minus federal reimbursements from the E-rate program. The E-rate program provides discounts to schools and libraries for telecommunications and Internet access and is funded through the federal Universal Service Fund at the direction of the Federal Communications Commission. The allowance would have the effect of associating the costs directly with the school system experiencing the costs in the calculation of formula needs. A similar allowance is currently used to recognize differences in transportation costs. The cost recognition is limited to 85% to encourage cost containment. An example of how the allowance would work is included in Appendix I.

Just like school districts, the E.S.U.'s with the greatest responsibility for offering distance education services experience the greatest costs. A technology allowance would also be added to the minimum allocation in the E.S.U. infrastructure funding formula for access and transport charges equal to 85% of the E.S.U. costs minus any federal reimbursements from the E-rate program. Tables showing E.S.U. technology infrastructure funding, core services funding, and total state and property tax funding beginning with FY99 are included in Appendix J.

A one time budget exception for school districts would accommodate the distance education program of services transferred from consortia that would no longer be exempt from the budget limitations. These costs are currently included in the inter-local agreement exception to the budget lids.

## **Teacher Training and Other Services**

Objectives 4 and 10 of the Task Force were directed toward teacher training and other technology-based services. Those objectives were:

4. Implementation of training and support programs for educators in the development and use of distance learning; and
10. Statewide provision of other technology-based services.

The plan would require the Distance Education Council to work with postsecondary education institutions in the offering of graduate courses in distance education. Undergraduate teacher training in technology based services is required for graduates of Nebraska postsecondary education institutions. For a list of instructional technology offerings in teacher education prepared by the Coordinating Commission for Postsecondary Education, see Appendix K.

Under the plan, learning management systems may be administered through the new Distance Education Council. Currently, districts may purchase systems such as Blackboard on their own or use the Angel system through an E.S.U. interlocal arrangement called Myelearning.org. Any learning management system administered by the Council would be required to comply with N.I.T.C. standards.