

LB 689

Distance Education Enhancement  
Task Force

December 31, 2005

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## **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.



**Appendix A: The Formation of Distance Learning Consortia  
in Nebraska and Map of E.S.U.'s with Distance Learning Pod  
Boundary Overlay**

# **THE FORMATION OF DISTANCE LEARNING CONSORTIA IN NEBRASKA**

Information presented to the  
Distance Education Enhancement Task Force  
July 6, 2005

By  
Shirley Schall, Director  
Southwest Nebraska Distance Learning Consortium

Commencing in 1992 with the Sandhills Telecommunications Education Project (STEP), Nebraska school districts began creating interlocal agreements and forming consortia for the purpose of delivering distance learning classes using interactive television. Thirteen years later, twelve consortia operate in Nebraska, and six Lincoln high schools also have distance learning classrooms.

## **HOW AND WHY THE "PODS" DEVELOPED**

In the early 1990's, all across rural Nebraska the schools were seeing declining student enrollments and fewer applications for teacher vacancies. Remote districts could not attract many qualified instructors, and newly graduated teachers were taking jobs in Colorado, Texas, and California, where the recruiters could offer higher salaries, better benefits, big sign-on bonuses, and attractive urban amenities.

That same teacher shortage, which reached alarming proportions a few years ago, led the drive to create the distance learning networks. For some consortia, it was a matter of the small schools starting to struggle in finding math, science, and foreign language teachers; to share staff with other districts seemed like a good solution to a growing problem. Rural schools could not get qualified teachers in the core curricula, and principals wanted to add classes for which they could not afford to hire a full-time teacher. Perhaps the teacher in the district did not have the proper endorsement or training to teach agriculture or foreign language classes. The schools could not afford to pay a full-time employee when they only needed two sections of Spanish; and, conversely, few teachers wanted or could afford a part-time job. Certainly, there was little chance a district could attract a new teacher into a community under those circumstances.

Additionally, student needs and interests, close associations already formed in ESU administrative councils and athletic/activities conferences, and similarities in educational philosophies and financial situations made it fairly easy for rural schools, educational service units and colleges to band together for the mutual good of all. Equally instrumental in the establishment of these virtual learning communities was geographic isolation in the western half of Nebraska, and the desire of rural parents to give their children the same advantages that their urban counterparts enjoyed. Distance learning was one way to help schools gain educational equity.

The advent of new NDE standards and assessments and certification requirements has also bonded schools in similar staff development needs that the ESU's cannot meet totally on-site. The federal requirements of No Child Left Behind place even greater demands on distance learning to assist districts trying to meet expanding needs for teacher training.

Beyond those points, through an effort to operate as economically as possible, schools and ESU's formed interlocal agreements for the consortium structure and for the sharing of instructors. With state aid formula uncertainties as they have been, the interlocal agreement put the cost of the leased DS3 and T1 lines and

teacher contracts outside the spending lid, thus allowing the schools to stretch every dollar to its maximum. This element of consortium development benefits large and small schools alike.

In a couple cases, consortium directors acknowledge that their networks developed simply because schools approached the educational service unit seeking to replicate distance learning opportunities they had heard about in a neighboring ESU.

## **STUDENT BENEFITS**

Administrators saw distance learning as a way to help reduce scheduling conflicts for students, as a way to allow students who previously failed a course to take that course again, and as a way to respond to needs of specific groups of students by being able to provide courses not otherwise available by traditional delivery methods because of insufficient student numbers. Examples of the latter might include music students wanting specialized lessons in violin and cello, and students interested in medical or legal careers wanting instruction in Latin. Schools also viewed distance learning networks as a way to provide specific services for students, such as family counseling, remote nursing and physical therapy, medical consultations with University of Nebraska Medical Center specialists, and diagnoses for syndromes and rare medical conditions.

For ESU's that helped create those consortia, it was looking for a better way to serve their schools. Many of the ESU's needed to cover very large areas of the state; staff training and development becomes easier when people don't have to drive to a single location 80 miles away. Staff developers and technical trainers can spend less time behind a windshield and more time actually working with the teachers, administrators and staff. Increases in the cost of fuel, automobile maintenance, and mileage provided additional incentives to use the interactive network.

In Southwest Nebraska, our distance education network formed because we had districts in the late 1980's and early 1990's that were struggling to share teachers when their districts could not hire qualified people. At that time, schools had to sacrifice precious time and efficiency so their students could take classes they needed; some teachers in ESU 15 schools drove from school to school to teach classes. Or, if that wasn't possible, schools put students on a bus and sent them to a district 12 to 15 miles down the road for a class they couldn't get in their own school. In the case of advanced placement classes, high school seniors who lived within 30-40 miles of McCook or North Platte drove to the Mid-Plains campuses to take college courses and then drove back to their schools to complete the rest of their daily studies. Our schools decided there had to be a better way to educate children and began discussions that led to the formation of Southwest Nebraska Distance Learning Consortium.

## **BENEFITS OF THE CONSORTIUM STRUCTURE**

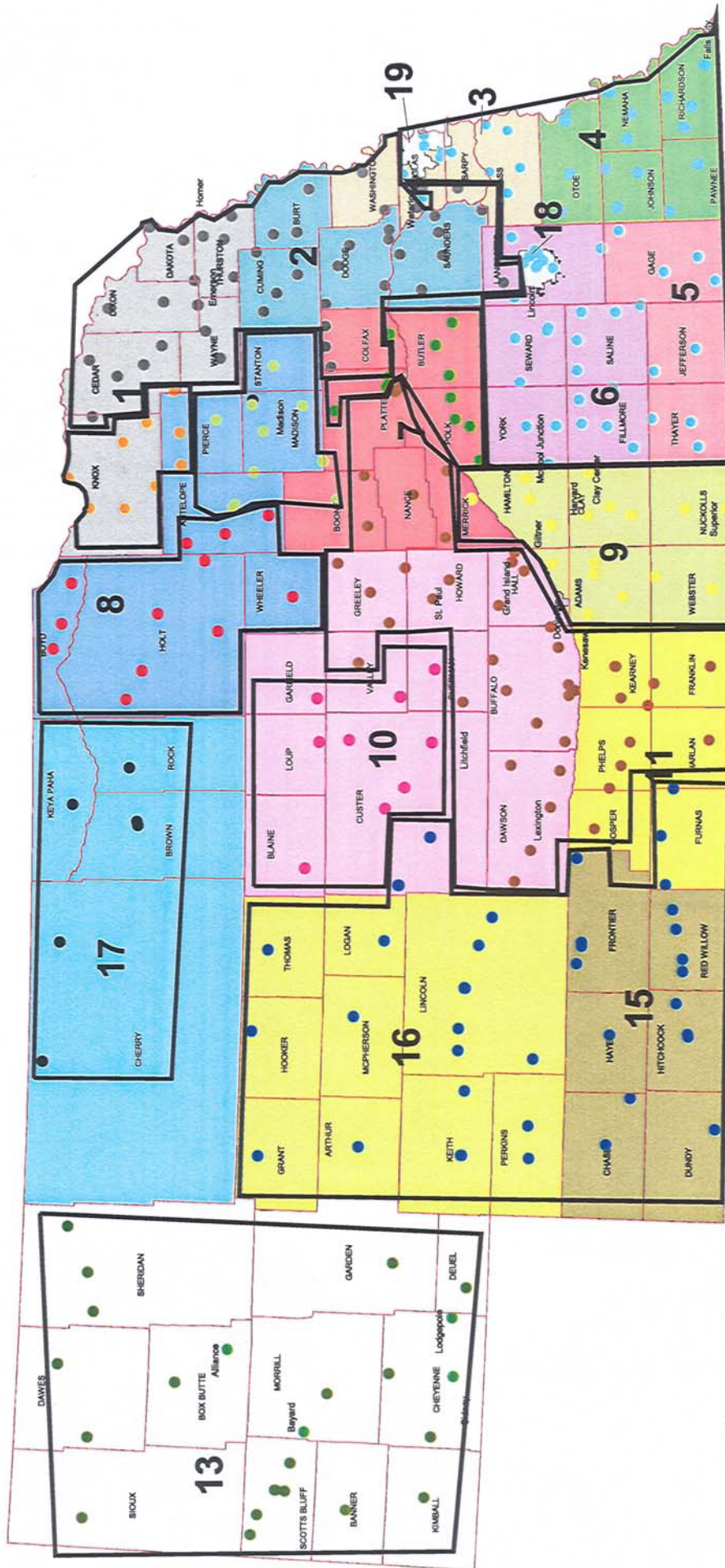
The consortium structure benefits the schools because most of them are multi-ESU in configuration, which affords more sharing and cooperation than if the schools remained in a single-ESU network structure. For a distance education consortium to be successful, it takes schools with common interests, located close enough to allow teachers to teach from the remote sites so the receiving schools feel the teacher is really their teacher, too. It also takes leadership capable of maintaining a community of mutual interests, respect and support. Those elements occur through the work of consortium administrators' meetings; principals', guidance counselors', and college instructional councils' sessions; teacher training workshops; creative and flexible scheduling; and a variety of community awareness activities.

Within our consortium, the school boards of our 31 districts remain highly interested and motivated to protect their local control of the education received by their students. The reason our network now offers 250 classes a year is because everyone is involved, each entity is represented at the consortium governing table, and the smallest K-12 school districts in the consortium are viewed by all as equal in importance with the largest districts, the ESU's and the colleges. Preserving these strong, highly beneficial relationships is paramount to any successful statewide data network. When schools lose local control of

their network, when they feel the network no longer belongs to them, I believe they will also lose interest in the use of that network.

When we began installing our consortia here in Nebraska, everyone involved in the projects envisioned that an integrated statewide network would soon develop. The telecommunications systems we built comprised just the first step, and we knew we would need additional outside funding and assistance to create the educational opportunities our students truly deserve. We stand at the threshold of that statewide system.

# ESUs with Distance Learning Pod Boundary Overlay



- Name of Pod
- Central Nebraska
- Crossroads
- Eastern Nebraska
- Niobrara Valley
- North Central
- Northeast
- Northeast Academy of Learners
- Sandhills
- Southeast
- Southwest
- Tri-Valley
- Western

Information Source:  
 Distance Learning Sites: Wayne Fisher  
 Technology Center, Nebraska Department of Education  
 County Boundaries & Towns: US Bureau of Census  
 Prepared by: Michelle Stephens, GIS Analyst  
 August 15, 2005, ArcView 3.2, ESRI



## Schools List By Consortium With ESU And Post Secondary Partners

### Central NE DLC

Aurora  
Blue Hill  
Central City  
Clay Center  
Doniphan-Doniphan/Trumbull  
Fairfield-South Central Unified 5  
Hampton  
Harvard  
Hastings-Adams Central  
Hastings-Central Community College  
Hastings-ESU 9  
Kenesaw  
Nelson-South Central Unified 5  
Red Cloud  
Roseland  
Superior-South Central NE Unified 5  
Sutton

### Crossroads DLEC

Brainard-East Butler  
Columbus  
Columbus-Central Community College  
Columbus-ESU 7  
Columbus-Lakeview  
David City  
Humphrey  
Osceola  
Polk-High Plains  
Rising City  
Schuyler Central  
Shelby  
Stromsburg-Cross County

### Eastern NE DLC

Allen  
Ashland  
Bancroft  
Beemer  
Cedar Bluffs  
Clarkson  
Coleridge  
Crofton  
Dodge  
Emerson-Emerson/Hubbard  
Fremont  
Fremont-ESU 2  
Hartington  
Homer  
Hooper  
Howells  
Laurel-Laurel/Concord  
Leigh  
Lyons  
Macy  
Mead  
Newcastle  
North Bend  
Oakland-Oakland/Craig  
Pender  
Prague  
Raymond-Raymond Central  
Scribner  
South Sioux City  
Tekamah  
Lyons  
Wahoo  
Wakefield  
Wakefield-ESU 1  
Walthill  
Wayne  
West Point  
Winnebago  
Wisner-Wisner/Pilger  
Wynot  
Yutan

### Niobrara Valley Tele-Partnership

Atkinson-West Holt Rural H.S.  
Bartlett-Wheeler Central  
Butte-West Boyd Unified  
Chambers  
Clearwater-NE Unified District 1  
Elgin  
Ewing  
Lynch-Unified Niobrara/Lynch  
Neligh-ESU 8  
O'Neill  
Orchard-NE Unified District 1  
Petersburg-Boone Central  
Spencer-West Boyd Unified  
Stuart

### North Central DLC

Ainsworth  
Ainsworth-ESU 17  
Bassett-Rock County H.S.  
Cody-Cody/Kilgore  
Springview-Keya Paha  
Valentine

### Northeast NE DLC

Bloomfield  
Creighton  
Niobrara  
Lynch  
Osmond  
Plainview  
Randolph  
Santee  
Verdigre-NE Unified District 1  
Wausa

### Northeast NE Learner's Academy

Albion-Boone Central  
Battle Creek  
Madison  
Neligh-Neligh/Oakdale  
Newman Grove  
Norfolk-Northeast Community College  
Norfolk  
Pierce  
Stanton  
Tilden-Elkhorn Valley  
Wayne-Wayne State College

### Sandhills Tech Education Program

Ansley  
Arcadia  
Broken Bow  
Burwell  
Dunning  
Loup City  
Merna  
Sargent  
Taylor-Loup County H.S.

### Southeast NE DLC

Adams-Freeman H.S.  
Arlington  
Auburn-ESU 4  
Beatrice  
Beatrice-ESU 5  
Beatrice-Homestead National Monument  
Beatrice-Southeast Community College  
Bennington  
Blair  
Bruning-Bruning/Davenport H.S.  
Chester-Thayer Central M.S.  
Cook-Nemaha Valley  
Crete  
Davenport-Bruning/Davenport M.S.  
Dawson-Dawson/Verdon  
Daykin-Meridian

### DeWitt-TriCounty

Deshler  
Dorchester  
Elkhorn  
Exeter-Exeter/Milligan H.S.  
Fairbury  
Fairmont-Fillmore Central M.S.  
Falls City  
Firth-Norris  
Friend  
Geneva-Fillmore Central H.S.  
Gretna  
Hebron-Thayer Central H.S.  
Henderson-Heartland  
Humboldt-Humboldt/Table Rock/Steinauer  
Johnson-Johnson/Brock  
Lewiston  
Lincoln-Southeast Community College  
Louisville  
Malcolm  
McCool Junction  
Milford  
Milford-ESU 6  
Milford-Southeast Community College  
Murdock-Elmwood/Murdock  
Murray-Conestoga  
Nebraska City  
Nebraska City-Visually Impaired  
Odell-Diller/Odell Secondary  
Omaha-ESU 3  
Omaha-Henry Dooly Zoo  
Omaha-Millard North  
Omaha-Millard South  
Omaha-Millard West  
Omaha-Westside Dist. 66  
Palmyra  
Pawnee City  
Plattsmouth  
Seward  
Shickley  
Stella-SE Consolidated  
Sterling  
Syracuse  
Tecumseh  
Utica-Centennial  
Valley  
Waterloo  
Waverly  
Weeping Water  
Wilber-Clatonia  
Wymore-Southern H.S.  
York

**Southwest NE DLC**

Arapahoe  
 Arnold  
 Arthur-Arthur County H.S.  
 Bartley-Twin Valley  
 Benkelman-Dundy County H.S.  
 Brady  
 Callaway  
 Cambridge  
 Culbertson-Hitchcock Co Unified  
 Curtis-Medicine Valley  
 Curtis-NE College of Tech Ag  
 Eustis-Farnam  
 Grant  
 Hayes Center  
 Hershey  
 Hyannis  
 Imperial-Chase County H.S.  
 Indianola-Republican Valley  
 Madrid-Wheatland  
 Maxwell  
 Maywood  
 McCook  
 McCook-MidPlainsCC  
 Mullen  
 North Platte  
 North Platte-ESU 16  
 North Platte-MidPlains CC  
 North Platte-UN West Central Research  
 Ogallala  
 Ogallala-ESU 16  
 Oxford-Southern Valley  
 Paxton-Consolidated  
 Stapleton  
 Sutherland  
 Thedford  
 Trenton-ESU 15  
 Trenton-Hitchcock Co. Unified  
 Tryon-McPherson County H.S.  
 Wallace  
 Wauneta-Palisade

**Tri-Valley North DEC**

Cedar Rapids  
 Elba  
 Clarks-High Plains Community M.S.  
 Columbus-ESU 7  
 Fullerton  
 Genoa-Twin Rivers H.S.  
 Greeley  
 Scotia-North Loup Scotia  
 Palmer  
 Spalding  
 St. Edward  
 Wolbach

**Tri-Valley South DEC**

Alma  
 Amherst  
 Axtell  
 Bertrand  
 Cairo-Centura H.S.  
 Cozad  
 Elm Creek  
 Elwood  
 Franklin  
 Gibbon  
 Gothenburg  
 Grand Island-Central Community College  
 Hildreth  
 Holdrege  
 Holdrege-ESU 11  
 Kearney  
 Kearney-ESU 10  
 Kearney-UN-Kearney  
 Lexington  
 Litchfield  
 Loomis  
 Minden  
 Ord  
 Overton  
 Pleasanton  
 Ravenna  
 Shelton  
 St. Paul  
 Sumner-Summer/Eddyville/Miller H.S.  
 Wilcox

**Western NE DLC**

Alliance  
 Bayard  
 Bridgeport  
 Chadron  
 Chadron-Chadron State College  
 Chappell  
 Crawford  
 Dalton-Leyton H.S.  
 Gering  
 Gordon  
 Harrisburg-Banner County H.S.  
 Harrison-Sioux County H.S.  
 Hay Springs  
 Hemingford  
 Kimball  
 Lodgepole  
 Minatare  
 Mitchell  
 Morrill  
 Oshkosh-Garden County H.S.  
 Potter-Potter/Dix H.S.  
 Rushville  
 Scottsbluff

**Scottsbluff-ESU 13**

Scottsbluff-WNCC

Total Sites (Schools/ESUs/IHE) 296

**Appendix B: Legislative Bill 689 – Slip Law, Committee Statement, Final Fiscal Note, Original Fiscal Note**



## LEGISLATIVE BILL 689

Approved by the Governor May 31, 2005

Introduced by Stuhr, 24; Raikes, 25

AN ACT relating to schools; to create and provide duties for the Distance Education Enhancement Task Force; to provide for termination; and to declare an emergency.

Be it enacted by the people of the State of Nebraska,

Section 1. The Distance Education Enhancement Task Force is created. Members of the task force shall be appointed on or before June 15, 2005, and shall include:

- (1) The chairperson and one other member of the Education Committee of the Legislature;
- (2) The chairperson of the Transportation and Telecommunications Committee of the Legislature;
- (3) The chairperson of the Appropriations Committee of the Legislature;
- (4) One representative of educational service units;
- (5) One representative of distance education consortia;
- (6) One representative of the State Department of Education who has expertise in technology infrastructure;
- (7) One representative of the Public Service Commission;
- (8) Two representatives of the Nebraska Information Technology Commission;
- (9) Two representatives of postsecondary education who have expertise in technology infrastructure, distance education, or dual-enrollment courses;
- (10) One representative of the Governor;
- (11) Two members who are either school district superintendents or public school principals; and
- (12) One representative of the Nebraska Educational Telecommunications Commission who has expertise in technology infrastructure or distance education.

The members listed in subdivisions (1), (4), (5), (6), (7), (9), (11), and (12) of this section shall be appointed by the Executive Board of the Legislative Council. The members listed in subdivisions (8) and (10) of this section shall be appointed by the Governor.

The chairperson of the Education Committee of the Legislature shall be the chairperson of the task force and shall call the initial and subsequent meetings of the task force. Members of the task force shall be reimbursed for their actual and necessary expenses incurred in carrying out their duties as members of the task force as provided in sections 81-1174 to 81-1177. The Education Committee of the Legislature, the Transportation and Telecommunications Committee of the Legislature, the Legislative Fiscal Analyst, the State Department of Education, and the Nebraska Information Technology Commission shall provide research and administrative support for the task force. For budgetary purposes only, the task force shall be within the Legislative Council.

The task force shall terminate on December 31, 2005.

Sec. 2. The Distance Education Enhancement Task Force shall develop an improvement plan to upgrade and coordinate distance education in Nebraska. The task force shall make recommendations for policies and potential legislation to the Clerk of the Legislature, the Education Committee of the Legislature, the Transportation and Telecommunications Committee of the Legislature, and the Appropriations Committee of the Legislature on or before December 31, 2005. The plan shall include, but not be limited to:

- (1) The development of a high capacity, scalable telecommunications infrastructure;
- (2) The development of an Internet protocol-based network to interconnect all existing and future distance education and videoconferencing facilities;
- (3) Upgrades of current telecommunications equipment;
- (4) Training and support programs for educators in the development and use of distance learning;
- (5) The transfer of distance education coordination responsibilities from distance education consortia to educational service units on or before July 1, 2007;
- (6) Statewide coordination for distance education offerings;

- (7) Potential funding sources;
- (8) The establishment of an equitable and affordable financing system for both equipment and usage;
- (9) The establishment of a system that allows school districts to purchase quality distance education offerings from other school districts either directly or with educational service units acting as fiscal agents; and
- (10) Statewide provision of other technology-based services.

The task force may hold one or more public hearings to obtain public input.

Sec. 3. Since an emergency exists, this act takes effect when passed and approved according to law.



**Ninety-Ninth Legislature - First Session - 2005**  
**Committee Statement**  
**LB 689**

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**Hearing Date:** February 7, 2005  
**Committee On:** Education

**Introducer(s):** (Stuhr, Raikes)  
**Title:** Create and provide duties for the Distance Education Enhancement Task Force

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**Roll Call Vote – Final Committee Action:**

- Advanced to General File
  - X Advanced to General File with Amendments
  - Indefinitely Postponed
- 

**Vote Results:**

- 6 Yes                                      Senators Byars, Howard, Kopplin, McDonald, Raikes, and Stuhr
  - 0 No
  - 0 Present, not voting
  - 2 Absent                                    Senators Bourne and Schrock
- 

**Proponents:**

Senator Elaine Stuhr  
 Virgil Horne  
 Larry L. Dlugosh  
  
 Edward Rastovski  
 Terry Haack  
 Al Inzerello  
 Brian Hale  
 Dennis Baack  
 Dennis Linster  
 Jeffrey Wooters  
  
 Al Schneider  
  
 Shirley J. Schall  
  
 Charles A. Doyle  
  
 Brian Halstead  
 Duane Obermier

**Representing:**

Introducer  
 Lincoln Public Schools  
 University of Nebraska-Lincoln / Distance  
 Education Coordinating Commission  
 Nebraska Council of School Administrators  
 Nebraska Council of School Administrators  
 Westside Community Schools  
 Nebraska Association of School Boards  
 Nebraska Community College Association  
 Wayne State College  
 Educational Service Units Network Operations  
 Committee  
 Educational Service Unit Administrative  
 Association  
 Southeast Nebraska Distance Learning  
 Consortium  
 Southeast Nebraska Distance Learning  
 Consortium  
 Nebraska Department of Education  
 Nebraska State Education Association

**Opponents:**

**Representing:**

**Neutral:**

**Representing:**

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**Summary of purpose and/or changes:**

Legislative Bill 689 would create the Distance Education Enhancement Task Force and state an intent to appropriate \$10 million per year for 2006-07, 2007-08, and 2008-09 to carry out recommendations of the task force.

Members would be appointed on or before June 15, 2005, and include:

1. The chairperson and one other member of the Education Committee of the Legislature;
2. The chairperson of the Transportation and Telecommunications Committee of the Legislature;
3. The chairperson of the Appropriations Committee of the Legislature;
4. Two representatives of Educational Service Units (E.S.U.'s);
5. Two representatives of distance education consortia;
6. Two representatives of the State Department of Education, one of whom shall have expertise in technology infrastructure;
7. Two representatives of the Public Service Commission;
8. Two representatives of the Nebraska Information Technology Commission;
9. Two representatives of postsecondary education; and
10. One representative of the Governor.

Members would be appointed by the Executive Board of the Legislative Council, except that the Department of Education members, the Nebraska Information Technology Commission members, and the Governor's representative would be appointed by the Governor.

The chairperson of the Education Committee would serve as the chairperson of the task force. The Education Committee, Transportation and Telecommunications Committee, Legislative Fiscal Analyst, State Department of Education, and Nebraska Information Technology Commission would provide research and administrative support. The task force would be within the Legislative Council for budgetary purposes only.

The task force would develop an improvement plan to upgrade and coordinate distance education and make recommendations for policies and potential legislation to the Clerk of the Legislature, Education Committee, Transportation and Telecommunications Committee, and Appropriations Committee on or before November 1, 2005. The plan would include:

1. The development of a broadband, scalable telecommunications infrastructure for use in distance learning classrooms;
2. The development of an Internet protocol-based network to interconnect all existing and future distance education and videoconferencing facilities;
3. Upgrades of current telecommunications equipment;
4. The provision of training and support programs for educators in the development and use of distance learning;
5. The transfer distance education coordination responsibilities from distance education consortia to E.S.U.'s by July 1, 2007;

6. The provision of statewide coordination for distance education offerings;
7. Potential funding sources;
8. The establishment of an equitable and affordable financing system for both equipment and usage;
9. The provision of a system that allows school districts to purchase quality distance education offerings from other school districts; and
10. The statewide provision of other technology based services.

The task force would be authorized to hold one or more public hearings to obtain public input.

An intent would be stated to appropriate \$10 million to the Department of Education each year for 2006-07, 2007-08 and 2008-09 to implement the task force recommendations.

The task force would terminate on December 31, 2005.

The measure contains an emergency clause.

**Explanation of amendments, if any:**

Committee Amendments would revise the membership of the Task Force such that the Task Force would be composed of:

1. The chairperson and 1 other member of the Education Committee of the Legislature;
2. The chairperson of the Transportation and Telecommunications Committee of the Legislature;
3. The chairperson of the Appropriations Committee of the Legislature;
4. Two representatives of E.S.U.'s;
5. Two representatives of distance education consortia;
6. One school district superintendent or public school principal;
7. One representative of the State Department of Education who would have expertise in technology infrastructure;
8. One representative of the Public Service Commission;
9. One representative of the Nebraska Information Technology Commission;
10. One representative of the Governor;
11. One representative of the Nebraska Educational Telecommunications Commission who has expertise in technology infrastructure or distance education;
12. One representative of the University of Nebraska who has expertise in technology infrastructure or distance education;
13. One representative of the state colleges who has expertise in technology infrastructure or distance education;
14. One representative of community colleges who has expertise in technology infrastructure or distance education; and
15. One representative of the Coordinating Commission for Postsecondary education who has expertise in dual enrollment courses.

The Governor would appoint his own representatives and the representatives of the Department of Education and the Nebraska Information Technology Commission. All other appointments would be made by the Executive Board of the Legislative Council.

The Committee Amendments would also extend the deadline for making recommendations from November 1, 2005 to December 31, 2005 and replace the term “broadband” with “high capacity” to describe the telecommunications infrastructure to be developed.

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**Senator Ron Raikes, Chairperson**

PREPARED BY: Sandy Sostad  
 DATE PREPARED: April 06, 2005  
 PHONE: 471-0054

**LB 689**

Revision: 01

# FISCAL NOTE

LEGISLATIVE FISCAL ANALYST ESTIMATE

Revised on 4/6/05 based on amendments adopted through 4/6/05.

ESTIMATE OF FISCAL IMPACT – STATE AGENCIES *				
	FY 2005-06		FY 2006-07	
	EXPENDITURES	REVENUE	EXPENDITURES	REVENUE
GENERAL FUNDS	\$10,000			
CASH FUNDS				
FEDERAL FUNDS				
OTHER FUNDS				
TOTAL FUNDS	\$10,000			

\*Does not include any impact on political subdivisions. See narrative for political subdivision estimates.

LB 689 establishes a sixteen member Distance Education Enhancement Task Force. Members of the task force are to be reimbursed for actual and necessary expenses. The task force is to develop an improvement plan to upgrade and coordinate distance education in the state. Recommendations are to be made by December 31, 2005. The task force may hold public hearings to obtain input. Staff of designated state agencies are to provide research and administrative support. The task force terminates December 31, 2005.

It is assumed the task force will meet up to four times and may hold one or two public hearings in 2005-06. Based upon this assumption, the estimated one-time fiscal impact for administrative expenses and to reimburse members for expenses is \$10,000 of general funds. The funds will be appropriated to the Legislative Council.

**FISCAL NOTE**  
 LEGISLATIVE FISCAL ANALYST ESTIMATE

<b>ESTIMATE OF FISCAL IMPACT – STATE AGENCIES *</b>				
	<b>FY 2005-06</b>		<b>FY 2006-07</b>	
	<b>EXPENDITURES</b>	<b>REVENUE</b>	<b>EXPENDITURES</b>	<b>REVENUE</b>
GENERAL FUNDS	\$10,000 - \$15,000		\$10,000,000	
CASH FUNDS				
FEDERAL FUNDS				
OTHER FUNDS				
<b>TOTAL FUNDS</b>	<b>\$10,000 - \$15,000</b>		<b>\$10,000,000</b>	

\*Does not include any impact on political subdivisions. See narrative for political subdivision estimates.

LB 689 establishes a seventeen member Distance Education Enhancement Task Force. Members of the task force are to be reimbursed for actual and necessary expenses. The task force is to develop an improvement plan to upgrade and coordinate distance education in the state. Recommendations are to be made by November 1, 2005. The task force may hold public hearings to obtain input. Staff of designated state agencies are to provide research and administrative support. The task force terminates December 31, 2005.

It is assumed the task force will meet up to four times and may hold one or two public hearings in 2005-06. Based upon this assumption, the estimated one-time fiscal impact for administrative expenses and to reimburse members for expenses is \$10,000 to \$15,000 of general funds. The funds will be appropriated to the Legislative Council.

Intent language in the bill provides for the appropriation of \$10 million in 2006-07, 2007-08 and 2008-09 to the State Department of Education to implement the recommendations of the task force.



**Appendix C: Distance Education Enhancement Task Force  
Membership, Objectives, and List of Presenters**

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## **Distance Education Enhancement Task Force Members**

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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

Lieutenant 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

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## **Distance Education Enhancement Task Force Mission**

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Goal: Improve student learning

Objectives:

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;
3. Upgrades of current telecommunications equipment;
4. Implementation of training and support programs for educators in the development and use of distance learning;
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;
7. Identification of Potential funding sources;
8. Establishment of an equitable and affordable financing system for both equipment and usage;
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; and
10. Statewide provision of other technology-based services.

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## **Distance Education Enhancement Task Force Presenters**

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**July 6, 2005**

Shirley Schall – Coordinator, Southwestern NE Distance Learning Consortium  
Topic: Formation of the Consortia

Brenda Decker – Chief Information Officer, State of Nebraska  
Topic: Network Nebraska

Deb Swanson – National Account Manager, QWEST Communications  
Topic: Expiring Contracts and Changing Technology

Lisa Newton-Hanson – Distance Education Teacher, Neligh-Oakdale Schools  
Jennifer Kocian – Distance Education Teacher, Mead Public Schools  
Topic: Teacher's experiences with distance education

Caleb Dunker and Cody Kavan – Distance Education Students, Cedar Bluffs H.S.  
Katie Smith and Sara Shabram – Distance Education Students, Neligh-Oakdale  
Topic: Student experiences with distance education

Dr. Roger Bruning – Co-Director, Center for Instructional Innovation and the  
National Center for Information Technology in Education  
Velma Warren Hodder Professor of Educational Psychology  
Topic: Educational Considerations for Internet Instruction

**August 10, 2005**

Max Kroger – Superintendent, Ord Public Schools  
Topic: Underutilized Distance Education Classrooms

Sharon Meyer – School Improvement/Accreditation Administrator, Nebraska Department  
of Education  
Topic: Rule 10 Accreditation Requirements

Wayne Fisher – Education Technology Division, Nebraska Department of Education  
Topic: Distance Education Enrollment Data

Marshall Hill – Executive Director, Coordinating Commission for Postsecondary  
Education  
Topic: Distance Education Enrollment Data

Diane Wolfe – Educational Service Unit #2

Topic: E-Rate

Mike Beach – Nebraska Educational Telecommunications Commission

Topic: Distance Technology Equipment / Hardware vs. Software

## **September 7, 2005**

Wayne Fisher – Education Technology Division, Nebraska Department of Education

Topic: Distribution of E-rate discounts

Mike Beach – Nebraska Educational Telecommunications Commission

Terry Dugas – Nebraska Educational Telecommunications Commission

Topic: Delivering educational material to schools and teachers

Jim Gessford – Attorney, Perry, Guthery, Haase & Gessford, P.C., L.L.O.

Topic: Considerations concerning the transfer of distance education coordination responsibilities from distance education consortia to educational service units

Brenda Decker – Chief Information Officer, State of Nebraska

Topic: School district access to Network Nebraska / Aggregated purchasing power

## **October 5, 2005**

Kent Kingston – Westside Community Schools

Topic: Distance education applications

Tim Ernst – University of Nebraska-Lincoln Independent Study High School

Topic: Nebraska Independent Study High School

## **November 2, 2005**

Marshall Hill – Executive Director, Coordinating Commission for Postsecondary Education

Topic: Instructional technology offerings in teacher education programs

Arnold Bateman – Distance Education Coordinating Council, University of Nebraska

Topic: University of Nebraska's utilization of distance education

Doug Zauha – Executive Director, myeLearning.org of Nebraska

Topic: myeLearning.org of Nebraska

Melodee Landis – Associate Professor of Teacher Education, University of Nebraska-Omaha

Topic: Teacher Training for distance education

Roger Adams – Qwest

Topic: Feasibility of utilizing Ethernet technology in the statewide network

**Appendix D: Chronology of Nebraska Educational  
Telecommunications Events**

**CHRONOLOGY OF NEBRASKA EDUCATIONAL  
TELECOMMUNICATIONS EVENTS, 1963-2013**

<b>Date</b>	<b>Event</b>
1963	Nebraska Educational Telecommunications Commission created
1984	Legislature's LB 994 formed the Education Technology Consortium advisory group that recommended the development of the NDE Technology Center
1988	Governor Orr required coordination of an education technology plan, and helped develop the precursor of the NEB*SAT Coordinating Council
1989	GTE satellite transponder first used for public television, public radio broadcasts and distance learning services
1989-96	Nebraska entered into a multi-state compact to offer Japanese language and other courses via a Federal Star Schools grant (\$700K/year)
1989-97	NEB*SAT Coordinating Council presented an annual Phased plan (I-IX) recommending State general fund investments for educational telecommunications (\$ 1.5M/year)
1992	Sandhills Technology Education Project (STEP pod) Consortium was activated with 9 sites using fiber-based analog technology
1993	Education Innovation Fund (State Lottery) was created with oversight of competitive projects by the Excellence in Education Council
1993	LB 452 allowed \$.05 property tax levy authority to each Educational Service Unit to provide for technology infrastructure and training.
1993-2002	Education Innovation Fund provided \$72M for K-12 educational projects and grants, of which approximately \$17.5 was invested in fiber-based distance learning and training
1993-95	Governor Nelson convened the Commission on Information Technology as described by LB 453
1995	LB 860 created the School Technology Fund authorizing up to \$13M for wiring school buildings and classrooms for Internet access
1995-2003	School Technology Fund provided \$11.5M to schools for wiring buildings and classrooms to the Internet from repayment of weatherization funds; reached 100% of buildings by 1998
1996-98	Southwest Nebraska Distance Learning Consortium was activated with 41 sites using JPEG technology
1996-98	Niobrara Valley Tele-Partnership consortium was activated with 15 sites using JPEG technology
1997	Northeast Nebraska Distance Learning Consortium was activated with 9 sites using JPEG technology
1997	Northeast Nebraska Learners Academy consortium was activated with 9 sites using JPEG technology
1997-99	Southeast Nebraska Distance Learning Consortium was activated with 72 sites using analog technology
1998	North Central Nebraska Distance Learning Consortium was activated with 6 sites using JPEG technology
1998	LB 924 created the Nebraska Information Technology Commission (NITC), three advisory councils, the Technical Panel, and the position of the Chief Information Officer
1998	The Federal Universal Service Fund and E-rate program was enacted
1998	The Nebraska Universal Service Fund was enacted with a surcharge of 6.95% on every telecommunications bill



**CHRONOLOGY OF NEBRASKA EDUCATIONAL  
TELECOMMUNICATIONS EVENTS, 1963-2013**

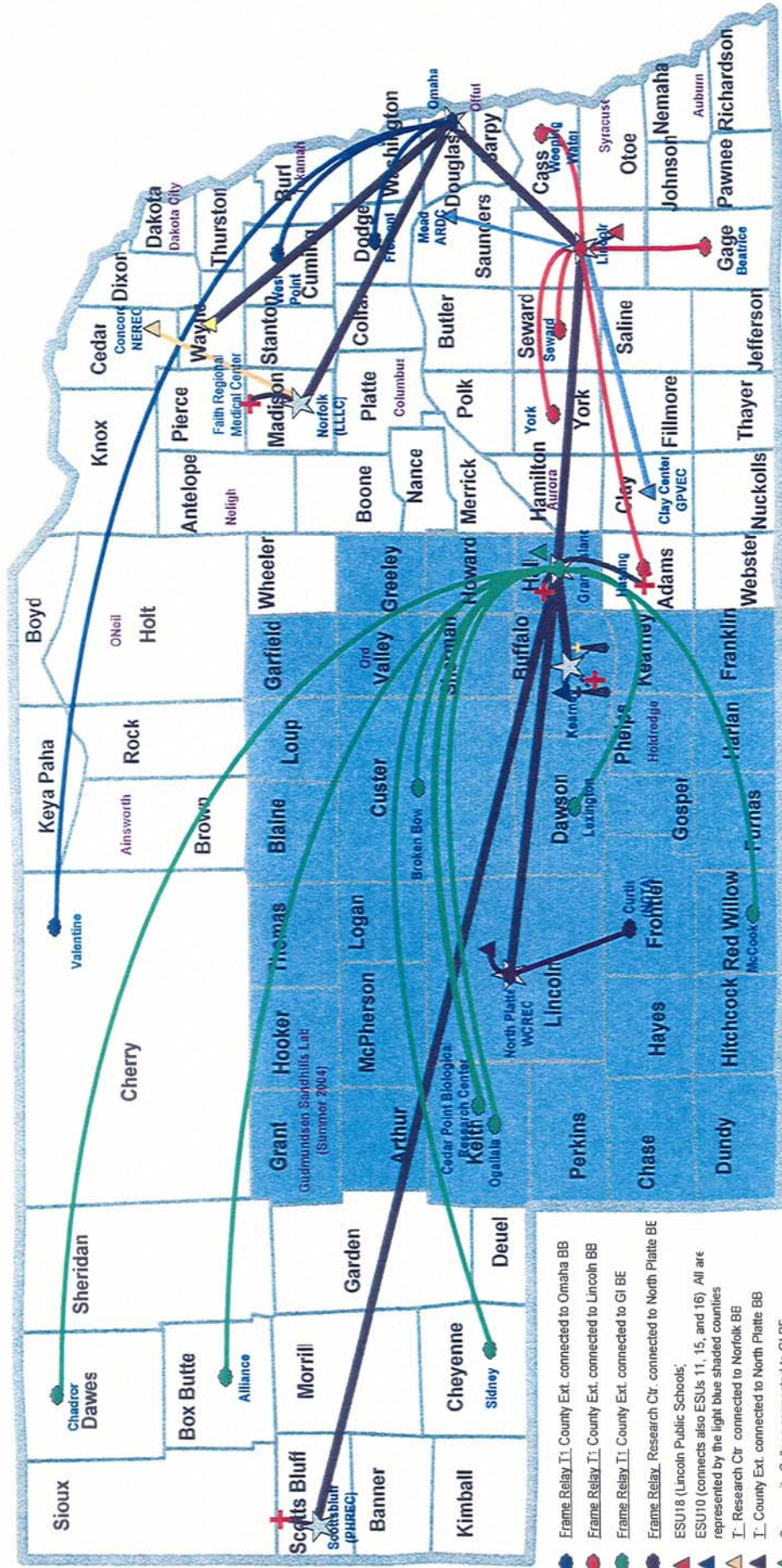
<b>Date</b>	<b>Event</b>
1998	The School Technology Infrastructure Fund was enacted to provide support to schools and ESUs to offset the cost of telecommunications
1999	LB 386 repealed the .5 cent ESU property tax levy for technology infrastructure and training. A \$3 million general fund appropriation was provided for this purpose beginning in 1999-00. Aid is to be increased by the allowable growth rate and growth in ESU membership each year thereafter.
1999-2005	The Legislature provided a total of \$17.2 million of general funds to ESU's as aid for technology infrastructure and training.
1999	The Skjei (pronounced 'shay') Telecommunications Study was commissioned by NETC
1999	Central Nebraska Distance Education Consortium was activated with 16 sites using JPEG technology
1999	Eastern Nebraska Distance Learning Consortium was activated with 40 sites using JPEG technology
1999	Western Nebraska Distance Learning Consortium was activated with 26 sites using JPEG technology
1999-2000	TriValley Distance Education Consortium was activated with 39 sites using both analog and JPEG technology
1999-2000	Telecommunications Infrastructure Needs Assessment (TINA) completed by Federal Engineering at the request of the NITC
2000	LB 878 renewed the Satellite transponder lease for 12 years
2001	First statewide network NETCOM RFP bids rejected for non-compliance
2001	Lt. Governor Heineman encourages DAS Division of Communications and the University of Nebraska to work together to aggregate statewide telecommunications traffic
2001	Southeast Nebraska Distance Learning Consortium upgrades from analog to digital H.323/H.261 with assistance of Federal Star Schools grant and local contributions
2002	Second statewide network Phase I and Phase II RFPs resulted in two successful bidders
2002	NITC Technical Panel's video standards reduced number of new videoconferencing technologies from four to two [H.263 & MPEG2]
2002	Crossroads Distance Education Consortium activated with 12 sites using MPEG2 technology (USDA-RUS and PTFP grants)
2002	Sandhills Technology Education Program upgraded 9 sites from analog to MPEG2 technology using NEB*SAT funding of \$300K.
2002-03	LB 833 Distance Education Network Completion (DENC) grant distributed \$3M to enable an additional 45 high schools to connect to existing distance learning consortia
2003	State Division of Communications activates network backbone segments from Omaha to Lincoln to Grand Island and Kearney using Alltel as the telecommunications provider
2003	Lincoln Public Schools became the first school district in the state to achieve 1000Mbps fiber connectivity
2004	State Division of Communications activates network backbone segments from Omaha to Norfolk, Grand Island to North Platte and the panhandle

**CHRONOLOGY OF NEBRASKA EDUCATIONAL  
TELECOMMUNICATIONS EVENTS, 1963-2013**

<b>Date</b>	<b>Event</b>
	using Qwest as the telecommunications provider
2004	NITC Technical Panel's video standards reduced number of new videoconferencing technologies from two to one [H.263/H.264]
2005	LB 689 creates the Distance Education Enhancement Task Force
2006	Southwest Distance Learning Consortium JPEG contracts to expire affecting 41 sites
2006	Niobrara Valley Tele-Partnership consortium JPEG contracts to expire affecting 15 sites
2007	Northeast Nebraska Distance Learning Consortium JPEG contracts to expire affecting 9 sites
2007	Northeast Nebraska Learners Academy consortium JPEG contracts to expire affecting 9 sites
2008	North Central Nebraska Distance Learning Consortium JPEG contracts to expire affecting 6 sites
2009	Central Nebraska Distance Education Consortium JPEG contracts to expire affecting 16 sites
2009	Eastern Nebraska Distance Learning Consortium JPEG contracts to expire affecting 40 sites
2009	Western Nebraska Distance Learning Consortium JPEG contracts to expire affecting 26 sites
2009	TriValley Distance Education Consortium—North JPEG contracts to expire affecting 11 sites
2011	Southeast Nebraska Distance Learning Consortium 100Mbps (H.263) contracts to expire affecting 72 sites
2012	Sandhills Technology Education Program MPEG2 contracts to expire affecting 9 sites
2012	Crossroads Distance Education Consortium MPEG2 contracts to expire affecting 12 sites
2012	NETC Satellite transponder lease expires
2013	TriValley Distance Education Consortium—South 100Mbps (H.263) contracts to expire affecting 28 sites

**Appendix E: Map of Network Nebraska**

# Network Nebraska



- Frame Relay T1 County Ext. connected to Omaha BB
- Frame Relay T1 County Ext. connected to Lincoln BB
- Frame Relay T1 County Ext. connected to GI BE
- Frame Relay Research Ctr. connected to North Platte BE
- ▲ ESU18 (Lincoln Public Schools); ESU10 (connects also ESUs 11, 15, and 16) All are represented by the light blue shaded counties
- ▲ T- Research Ctr. connected to Norfolk BB
- ▲ T- County Ext. connected to North Platte BB
- ▲ Community College connected to GI BE
- ▲ Research Ctr. connected to Lincoln BE
- ▲ State College
- ▲ Backbone Site
- ▲ County Ext. Wireless
- ▲ Hospital/Videx
- ▲ Hospital
- ▲ Research Center

**Appendix F: Nebraska Information Technology Commission  
Video Standards**



NEBRASKA INFORMATION  
TECHNOLOGY COMMISSION

STANDARDS AND GUIDELINES

**Video and Audio Compression Standard for Synchronous  
Distance Learning and Videoconferencing**

Category	<b>Video Architecture</b>
Title	<b>Video and Audio Compression Standard for Synchronous Distance Learning and Videoconferencing</b>
Number	

Applicability	<input checked="" type="checkbox"/> <b>State Government Agencies</b> <input checked="" type="checkbox"/> All..... <b>Standard</b> <input type="checkbox"/> Excluding ..... <b>Not Applicable</b>
	<input checked="" type="checkbox"/> <b>State Funded Entities</b> - All entities receiving state funding for matters covered by this document..... <b>Standard</b> <input checked="" type="checkbox"/> <b>Other:</b> Entities using state-owned or state-leased communication networks for synchronous video..... <b>Standard</b>
<b>Definitions:</b> <b>Standard</b> - Adherence is required. Certain exceptions and conditions may appear in this document, all other deviations from the standard require prior approval of _____. <b>Guideline</b> - Adherence is voluntary.	

Status	<input checked="" type="checkbox"/> Adopted <input type="checkbox"/> Draft <input type="checkbox"/> Other: _____
Dates	Date: July 13, 2004 Date Adopted by NITC: September 9, 2004 Other:

## 1.0 Standard

### 1.1 Video protocol standard for synchronous distance learning and videoconferencing

Video Protocol Standard	Comments
H.263	For data rates above 384 Kbps
H.264 (MPEG-4 Part 10)	For data rates at or below 384 Kbps

The CODECs selected for purchase or use should be capable of accommodating both standards and be capable of manual rate selection and/or automatic rate selection. The interconnecting CODECs should be allowed to automatically negotiate the best data rate.

### 1.2 Audio protocol standard for synchronous distance learning and videoconferencing

Audio Protocol Standard	Comments
G.722	For data rates above 128 Kbps
G.722 or G.722.1 or G.728	For data rates at or below 128 Kbps

The CODECs selected for purchase or use should have the ability to use G.722 at all speeds and one or both of the other two standards listed for lower speeds. If any two CODECs do not have a common protocol at or below 128Kbps then they should continue to use G.722. The CODECs selected for purchase or use should be capable of accommodating audio standard G.722 and be capable of manual rate selection and/or automatic rate selection. The interconnecting CODECs should be allowed to automatically negotiate the best data rate.

## 2.0 Purpose and Objectives

The purpose of this document is to establish video and audio protocol standards that will enable all existing and future synchronous distance learning and videoconferencing facilities in Nebraska to achieve interoperability and maintain an acceptable quality of service.

## 3.0 Definitions

### 3.1 Bandwidth

In digital applications, this term refers to the speed at which data is transmitted. It is usually expressed in terms of bits per second. It is often used interchangeably with the term data rate.

### 3.2 CODEC

Stands for Encoder / Decoder or Coder / Decoder. This device changes outbound analog video and audio into data and inbound data into analog video and audio. It is a device that attaches directly to the video and audio source.

3.3 Data Rate  
This is the amount of digital information that a system can process and/or transmit. It is usually expressed in terms of bits per second. It is often used interchangeably with the term bandwidth.

3.4 Distance Learning  
Distance learning is the delivery of educational experiences where the instructor(s) and student(s) are in different locations and engaging in learning at the same time (synchronously) or at different times (asynchronously). Synchronous distance learning typically involves 2-way interactive video delivered to two or more classrooms.

3.5 G.7xx  
A family of audio protocols with varying specifications as developed by the ITU. Examples include:

Standard	Required Bandwidth	Frequency Response
ITU-TG.711	56/64Kbps	50Hz – 3.4KHz
ITU-TG.722	48/56/64Kbps	50Hz – 7KHz
ITU-TG.728	16Kbps	50Hz – 3.4KHz

3.6 Gateway  
As used in this document, this term refers to a device or system that allows a system using one protocol standard to communicate with a system using a different protocol standard.

3.7 H.2xx  
A family of video protocols with varying specifications as developed by the ITU. Examples include H.261 and H.263. They are differentiated by the specific algorithms used to encode and decode video.

3.8 H.3xx  
A family of communications protocols with varying specifications as developed by the ITU. Each of these protocols have multiple options of video, audio and data protocols defined within them. Examples include:

H.320 for transportation on an ISDN network  
H.321 for transportation on an ATM network  
H.323 for transportation on an IP network

3.9 ITU  
International Telecommunication Union, headquartered in Geneva, Switzerland is an international organization within the United Nations System where governments and the private sector coordinate global telecom networks and services. Website: <http://www.itu.int/home/index.html>

3.10 Mbps  
Megabits Per Second – Millions of bits per second.



### 3.11 MPEG

Motion Picture Experts Group – A body that defines protocols for digitally encoding video and audio. Some of the protocols defined by this group include:

MPEG 1 – Designed to compress the data required to pass analog video and audio.

MPEG 2 – An improvement in efficiency over the algorithms of MPEG 1

MPEG 4 – Designed to incorporate voice, video and data as objects that can be transported interchangeably.

## 4.0 Applicability

These standards apply to synchronous distance learning and videoconferencing facilities as follows:

- If utilizing state-owned or state-leased communications networks:
  - Any synchronous distance learning facility or videoconferencing application which utilizes state-owned or state-leased communications networks must comply with the compression standards listed in Section 1.0; or
  - The entity must provide, or arrange for, the necessary gateway technology to transcode to the adopted standards.
- If using state funding:
  - All **new** facilities or applications receiving state funding must comply with the compression standards listed in Section 1.0.
  - All **existing** facilities or applications receiving state funding for ongoing operations must convert to the standards listed in Section 1.0 as soon as fiscally prudent or upon renewal of any existing communications service contract, whichever comes first.
- These standards **do not apply** to the following entities:
  - University of Nebraska (relating to the university's academic research mission)
  - Any entity which applies for, and receives, a waiver of these requirements from the NITC.

### GENERAL STATEMENT ON APPLICABILITY

The Governing board or chief administrative officer of each organization is responsible for compliance with these standards. The NITC will consider adherence to technical standards as part of its evaluation and prioritization of funding requests

## 5.0 Responsibility

An effective program for video and audio standards compliance involves cooperation of many different entities. Major participants and their responsibilities include:

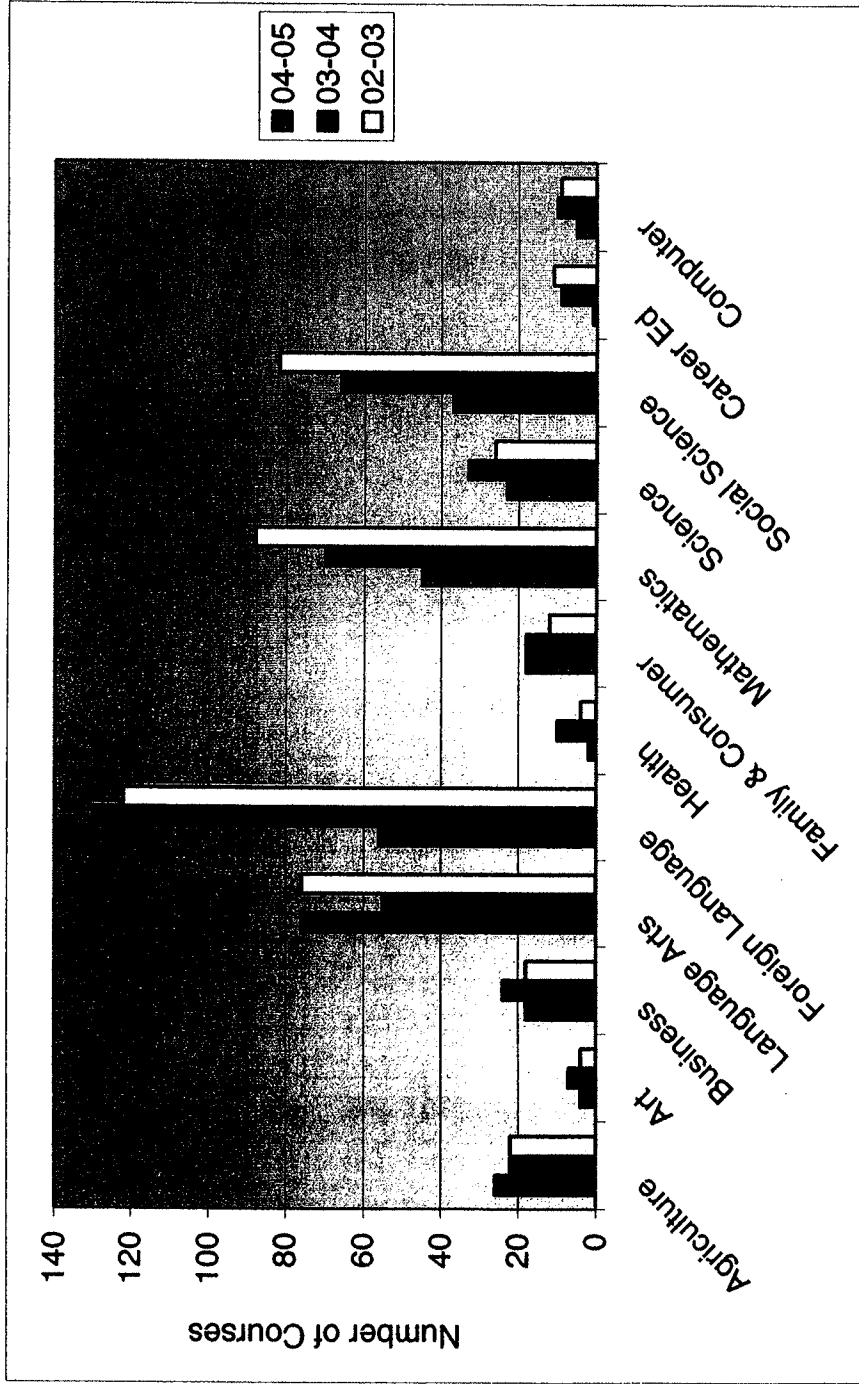
1. Nebraska Information Technology Commission. The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate quality of service and uniformity for information systems through adoption of policies, standards, and guidelines.
2. Technical Panel Video Standards Work Group. The NITC Technical Panel, with advice from the Video Standards Work Group, has responsibility for recommending video standard policies and guidelines and making available best practices to operational entities.
3. Agency and Institutional Heads. The highest authority within an agency or institution is responsible for interoperability of information resources that are consistent with this policy. The authority may delegate this responsibility but delegation does not remove the accountability.
4. Information Technology Staff. Technical staff must be aware of the opportunities and responsibility to meet the goals of interoperability of information systems.

## 6.0 Related Documents

- 6.1 Report: A Video And Audio Compression Standard For Synchronous Distance Learning And Videoconferencing In The State Of Nebraska, July 13, 2004.  
([http://www.nitc.state.ne.us/standards/video/VideoStandardsReport2004\\_final\\_20040824.pdf](http://www.nitc.state.ne.us/standards/video/VideoStandardsReport2004_final_20040824.pdf))
- 6.2 Video and Audio Compression Standard for Synchronous Distance Learning and Videoconferencing, adopted on February 21, 2002, and to be repealed upon adoption of this document.

**Appendix G: High School, Dual-Enrollment, and  
Postsecondary Distance Education Courses**

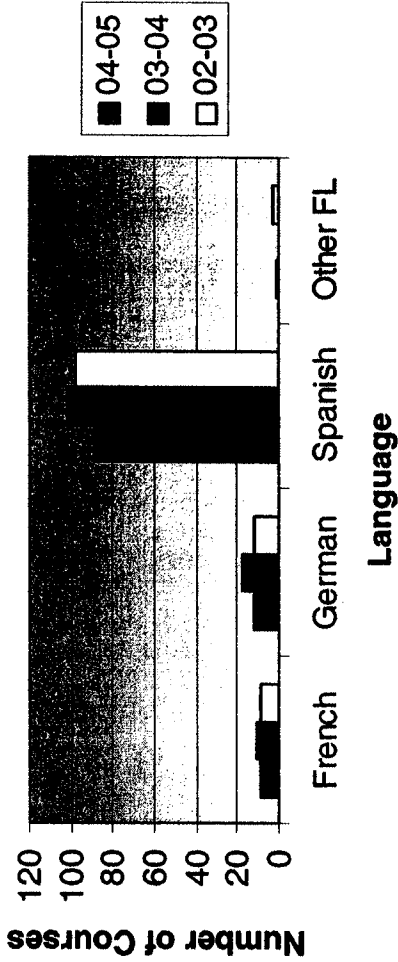
# Synchronous Distance Learning Courses via Two-Way Interactive Audio-Video As Reported to the Nebraska Department of Education 2002-2005



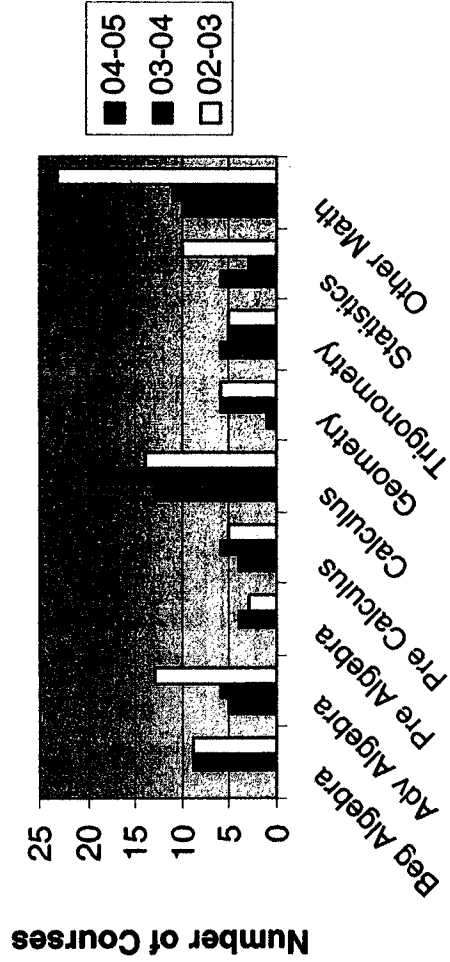
	2002-03	2003-04	2004-05
Number of Districts	121	285	135**
Number of Courses	314	336	341**
Number of Students	1906	2074	2055**

\*\*Data from seven districts not yet submitted at time of this data summary

## Foreign Language



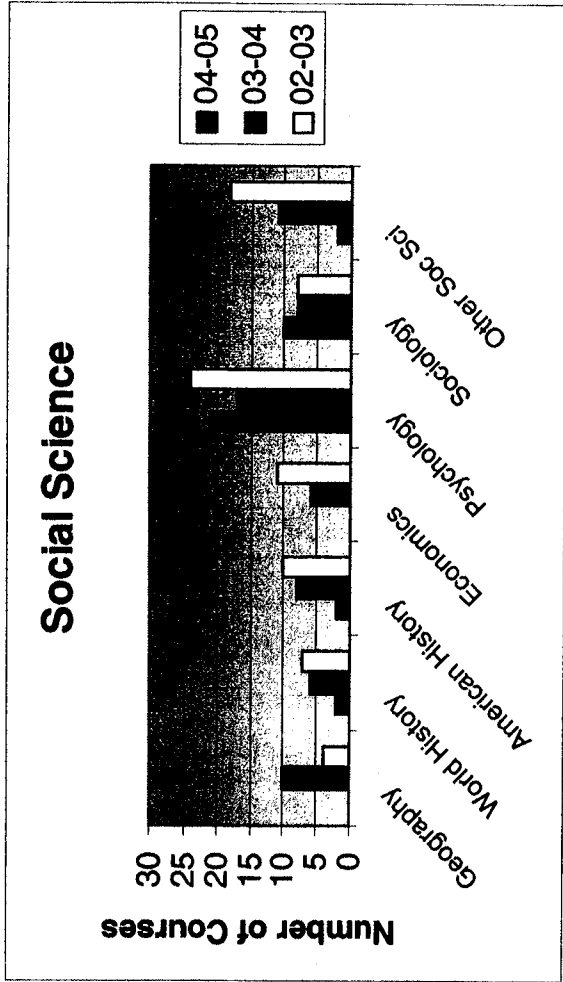
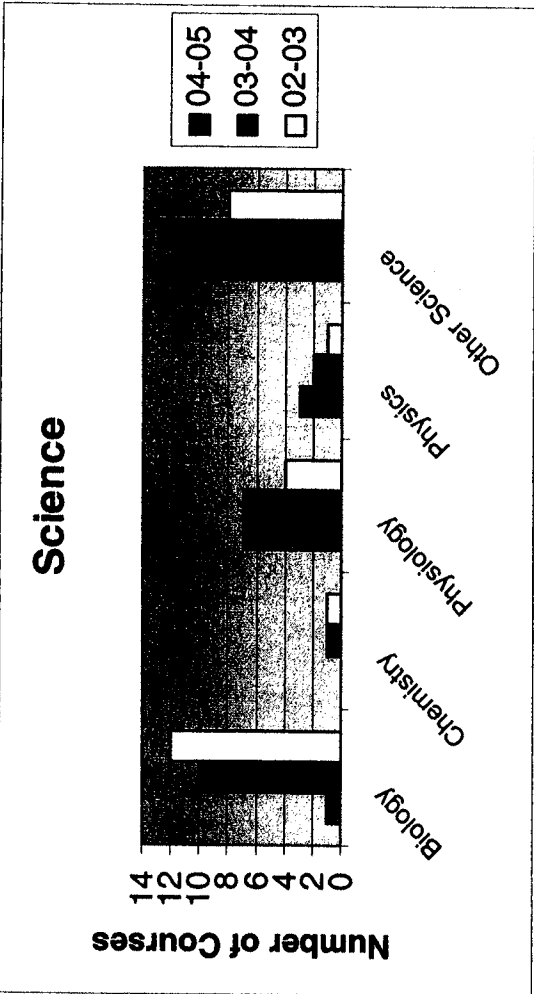
## Mathematics



Distance Learning Courses			
	04-05	03-04	02-03
Agriculture	22	22	22
Art	4	7	4
Business	18	24	18
Language Arts	76	55	76
Foreign Language	122	130	122
French	9	11	9
German	12	17	12
Spanish	98	102	98
Health	4	10	4
Family & Consumer	12	18	12
Mathematics	88	70	88
Beg Algebra	9	9	9
Adv Algebra	5	6	13
Pre Algebra	4	4	3
Pre Calculus	5	6	5
Calculus	14	20	14
Geometry	6	6	6
Trigonometry	5	5	5
Statistics	7	3	10

\*Othr FL: Latin, Japanese

\*Othr Math: Finite, General Math, Applied Math, Business Math



Distance Learning Courses			
	04-05	03-04	02-03
Science	26	33	26
Biology	12	10	12
Chemistry	1	1	1
Physiology	4	7	4
Physics	1	2	1
Social Science	82	66	82
Geography	4	10	4
World History	7	6	7
American History	10	8	10
Economics	11	6	11
Psychology	22	17	24
Sociology	8	8	8
Career Ed	11	9	11
Computer	9	10	9

\*Other Sci: Marine Biology, Earth Sci, Zoology, Genetics, Anatomy  
 \*Other Soc Sci: Mod Prob

**Synchronous Distance Learning Courses Via Two-Way Interactive Audio-Video  
As Reported by School Districts to the Nebraska Department of Education**

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Ainsworth	Rock County HS	Physics	Rock County HS	Calculus
			Rock County HS	Physics
Allen	Newcastle PS	Spanish I	Leigh PS	Busns Law
	Wakefield PS	Ind Living	Leigh PS	Net Sys
	Wakefield PS	Parenting	Wakefield PS	Parenting
			Wakefield PS	Indep Living
Alma			Franklin PS	French II
Amherst	Central CC/S-E-M PS	American Literature		
	Central CC/S-E-M PS	English 101		
Anselmo-Merna	Sargent PS	Animal Science	Broken Bow PS	English Other
	Arcadia PS	Physiology	Arcadia PS	Physiology
			Kentucky Ed TV	German II
			Sargent PS	Animal Science
Ansley	Loup City PS	Spanish I	Broken Bow PS	Accounting Adv
	Broken Bow PS	British Literature	Broken Bow PS	British Literature
	Broken Bow PS	Writing	Broken Bow PS	Writing
Arcadia	Loup City PS	Spanish I	Loup City PS	Spanish II
	Burwell PS	Trigonometry	Burwell PS	Trigonometry
	Burwell PS	Pre Calculus	Burwell PS	Pre Calculus
	Loup City PS	Spanish II	Loup City PS	Spanish I
Arnold	Wheatland PS	Spanish II	Wheatland PS	Spanish I
	Wheatland PS	Spanish I	Wheatland PS	Spanish II
Arthur County High	Hershey PS	Calculus	Wheatland PS	Spanish II
	Wheatland PS	Spanish II	Wheatland PS	Spanish I
Aurora	So Cent Unif #5	French II	So Cent Unif #5	French I
Axtell			Wilcox-Hildreth PS	Ag/NR-Intro
Bancroft-Rosalie	Wisner-Pilger PS	World History	Howells	Ag/NR-AG Mgt
	Scribner-Snyder PS	Ag Bus Mgt	Wakefield	Parenting
			Wakefield	Indep Living
			Wisner-Pilger	World History
Banner County	ESU #13	Spanish I		
	ESU #13	Spanish II		
	ESU #13	Spanish III		
Battle Creek	Northeast CC-Norfolk	Calculus III		
	Madison PS	Psychology		
	Madison PS	sociology		
	Northeast CC-Norfolk	Calculus II		

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Bayard	Rushville PS	Body Struc & Func	Kimball PS	French I
	Kimball PS	French II	Potter-Dix PS	German I
	Rushville PS	Medical Term		
Beatrice	Palmyra PS	Ag/Nr-Intro	Palmyra PS	Ag/NR-Intro
	Plattsmouth PS	Statistics		
Bennington			Conestoga PS	Busns Law
			Conestoga PS	Busns Oth
Bertrand	Wilcox-Hildreth PS	Accounting Beg	Elwood PS	German II
Bloomfield	Lynch PS	Writing	Creighton PS	Calculus
	Creighton PS	Calculus	Creighton PS	Calculus
	Cody-Kilgore PS	Physiology	Cody-Kilgore PS	Physiology
			Wausa PS	Accounting Beg
Brady	ESU #15	Spanish I	ESU #15	Spanish I
			ESU #15	Spanish II
Bridgeport	Kimball PS	French I	Kimball PS	French II
	Scottsbluff PS	Sociology Other	Chappell PS	Calculus
Broken Bow	Anselmo-Merna PS	Modern Prob	Anselmo-Merna PS	Sociology
	Ansley PS	Indep Living	Anselmo-Merna PS	Modern Problems
	Arcadia PS	Physiology	Ansley PS	Indep Living
	Anselmo-Merna PS	Sociology		
Bruning-Davenport Unif	Deshler	Writing		
	Deshler	Literature		
Burwell Jr-Sr High	Anselmo-Merna PS	Sociology	Anselmo-Merna PS	Comp Oth
	Ansley PS	Ind. Living	Anselmo-Merna PS	Sociology
	Arcadia PS	Physiology	Anselmo-Merna PS	Modern Prob
			Broken Bow PS	Spanish III
			Ansley PS	Indep Living
		Broken Bow PS	Accounting AD	
Cambridge	McCook CC	College English	McCook College	College English
	McCook CC	College English	McCook College	College English
Cedar Bluffs	Mead PS	Agricultural Iss Otr		
	Mead PS	Small Animal Care		
Cedar Rapids	St. Edward PS	Independent Living	Palmer PS	Spanish II
	St. Edward PS	Comp FCS	Palmer PS	Spanish I
	Palmer PS	Spanish III		
	Palmer PS	Spanish II		
	Palmer PS	Spanish I		
Central City	Doniphan/Trumbull PS	Spanish III		
Centura	Ravenna pS	Art II	Ravenna PS	Art III
	Ravenna pS	Art I	Ravenna PS	Art II
	Ravenna pS	Art III	Ravenna PS	Art I



School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Chadron	Kimball PS	French II	Kimball PS	French I
	Kimball PS	French I	Kimball PS	French II
Chambers	West Holt High	Spanish II	Elgin PS	Ag/NR Mgtg
	Cody-Kilgore PS	Physiology	West Holt HS	College Skills
			Spencer-Naper PS	Family Health
			Butte PS	Ag Orientation
Chase County High	Hitchcock County PS	German II	Culbertson PS	German II
			Culbertson PS	German I
Clarkson	Homer PS	Trigonometry	Wayne PS	Psychology
	Wayne PS	Psychology		
	Laurel-Concord PS	Net Systems		
Clay Center			Hampton PS	Spanish I
			Hampton PS	Spanish II
Cody-Kilgore	Rock County HS	Physics	Keya Paha County HS	Art Other
	Ewing PS	Pre Calc	Ewing PS	Pre Calculus
	Keya Paha Co High	Art III	Rock County HS	Calculus
Coleridge	Laurel-Concord	Busns Law	Logan View PS	NET Sys
	Laurel-Concord	English	Laurel-Concord PS	Language Arts
	Laurel-Concord PS	Com Cad	Laurel-Concord PS	COM CAD
	Laurel-Concord PS	Net Systems	Laurel-Concord PS	Net Sys
			Mead PS	Agriculture Other
			Laurel-Concord PS	Electronic
Columbus	David City PS	Zoology		
	David City PS	Zoology		
Conestoga	Shickley PS	Beg Animal Sci	Heartland PS	German II
	Heartland PS	German I		
Crawford			Rushville PS	Structure & Function
			ESU#13	Spanish II
			Rushville PS	Medical Terminology
			ESU#13	Spanish I
			ESU#13	Spanish I
			ESU#13	Spanish I
Creek Valley (formerly Chappell & Lodgepole)	Potter-Dix PS	Spanish I		
	Western NE CC	French II		
	Western NE CC	Psychology		
	Potter-Dix PS	Spanish II		
Crofton	Wayne State College	Spanish I	Wayne State Coll	Spanish I
	Wayne State College	Spanish II		
Cross County	Central CC-Columbus	English 101	Central Coll-Columbus	Writing
	Central CC-Columbus	English 210	Rising City PS	Biology II
	Columbus PS	German 1		

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
David City	Humphrey PS	German II	Central Coll-Columbus	English Comp 101
			Humphrey PS	German I
			Central Coll-Columbus	Intro to Literature
Diller-Odell	Southern PS	Indep Living	Southern	Spanish I
	Southern PS	Spanish I	Southern	Adult Living
	Southern PS	Spanish II	Southern	Spanish II
	Southern PS	Spanish II		
	Southern PS	Adult Living		
	Southern PS	Spanish I		
	Southern PS	Spanish I		
Dodge	Scribner-Snyder PS	Ag Business Mgt	Metro College-Omaha	English Literacy
	Metro CC-Omaha	College Trigonometry	Mead PS	Ag Literacy
	Emerson Hubbard PS	Business Law	West Point PS	Net SYS
	Metro CC-Omaha	English Comp II	Metro College-Omaha	English Comp 1
	Metro CC-Omaha	College Algebra	Metro College-Omaha	English Comp II
	Howells PS	Animal Science	Mead PS	Pre Calculus
			Metro College-Omaha	College Algebra
			Mead PS	Calculus
Doniphan-Trumbull	Hampton PS	Spanish I		
	Central City PS	Calculus		
Dorchester	Friend PS	Spanish II	Friend PS	Spanish I
	Friend PS	Spanish I	Friend PS	Spanish II
East Butler	Central Coll-Columbus	College English	Central Coll, Columbus	English Lit-College
Elba	Palmer PS	Spanish II	Palmer PS	Spanish III
	Palmer PS	Spanish I	Palmer PS	Spanish II
			Palmer PS	Spanish I
Elgin	Wheeler Central PS	Great Plains Hist	West Holt Rural HS	College Skills
	Spencer-Naper PS	Lifetime Wellness	Spencer-Naper PS	Lifetime Wellness
			Clearwater PS	Computer Choices
Elkhorn Valley	Madison PS	Writing	Norfolk PS	French II
	Madison PS	Psychology	Northeast College	Calculus
	Madison PS	English Other	Chambers PS	English IV
	Elgin PS	Ag/NR-Intro		
	Madison PS	Sociology		
	Chambers PS	English IV		
Elmwood-Murdock	Shickley PS	Animal Science	Shickley PS	Animal Science
Elwood	Pleasanton PS	Spanish I	Pleasanton PS	Spanish II
	Pleasanton PS	Spanish II	Pleasanton PS	Spanish I
Emerson-Hubbard	Wakfield PS	Child Development		
	Wakfield PS	Adult Living		
Eustis-Famam			Arnold PS	Psychology

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Ewing	Verdigre PS	Acct Ad		
	Nebr Unif	Comp App I		
Exeter-Milligan	Southeast CC-Beatrice	Composition II	Palmyra PS	Spanish I
	Univ of Nebr-Kearney	Calculus II	Palmyra PS	Spanish II
	Univ of Nebr-Kearney	Calculus I		
Fillmore Central			Shickley PS	Cisco
Freeman	Gretna PS	Modern Fiction	Gretna PS	Composition I
	Gretna PS	Composition I	Gretna PS	Modern Fiction
Friend	Arlington PS	Calculus		
Fullerton			St Edward PS	Spanish II
Gibbon	Shelton PS	Physiology	UNL Independent HS	Food Science
	Elwood PS	German I	Franklin PS	French I
	Franklin PS	French II	Franklin PS	French II
Greeley-Wolbach	Palmer PS	Spanish I		
	Palmer PS	Spanish II		
Hampton	Aurora PS	Psychology	Central City PS	Calculus
	Blue Hill PS	German II	Blue Hill PS	German II
	Central City PS	Calculus	Blue Hill PS	German I
Hay Springs			Crawford PS	Anatomy & Physics
			Potter-Dix PS	German I
			ESU #13	Spanish II
			ESU #13	Spanish I
			ESU #13	Spanish I
Hayes Center	Southern Valley PS	Spanish II	Southern Valley PS	Spanish I
	Southern Valley PS	Spanish I	Southern Valley PS	Spanish I
			Southern Valley PS	Spanish II
			Lewiston PS	Physiology
Heartland			Pawnee City PS	Spanish 1
			Thayer Central PS	Calculus
Hemingford			Minatare PS	Drama/Theatre
Hershey			Wallace PS	Statistics
			Wallace PS	Algebra AD
High Plains	Central CC-Columbus	English Other		
	Columbus PS	German I		
	Columbus PS	German I		
Hitchcock County			Hitchcock Co Unif-Trenton	Spanish I
			Hitchcock Co Unif-Trenton	Spanish II
			Hitchcock Co Unif-Trenton	Writing
Holdrege	Pleasanton PS	Psychology		
	Pleasanton PS	Psychology		

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Homer	Mead PS	Marine Biology	Mead	Small Animal Care
	Wakefield PS	Parent/Child Dev.		
	Mead PS	Small Animal Care		
Howells	Metro CC-Omaha	English Comp	Metro CC-Omaha	English Comp I
	Tekamah-Herman PS	Networking	Metro CC-Omaha	English Comp II
	Dodge PS	Intro Psychology	Metro CC-Omaha	English Literacy
	Laurel-Concord PS	Microsoft Office	Metro CC-Omaha	Intro to Psych
	Metro CC-Omaha	Coll Trigonometry	Metro CC-Omaha	Coll Trigonometry
	Metro CC-Omaha	College Algebra	Metro CC-Omaha	College Algebra
Humphrey	Columbus PS	Electronic	East Butler PS	Sociology
	Lakeview PS	Science Oth	David City PS	Business Law
Humphrey St. Francis				
Hyannis High	Wheatland PS	Spanish I	Wheatland PS	Spanish I
	Wheatland PS	Spanish II	Wheatland PS	Spanish II
	Hershey PS	Calculus	Hershey PS	Calculus
Johnson-Brock	Sterline PS	Spanish III	Sterling PS	Spanish II
	Sterline PS	Spanish II	Sterling PS	Spanish I
	Sterline PS	Spanish I		
Keya Paha Co High	Ewing PS	Pre-Calculus	Cody Kilgore PS	Physiology
			Ewing PS	Pre-Calc
Laurel-Concord	Coleridge PS	Spanish II		
	Coleridge PS	English Other		
	Coleridge PS	Family Relations		
	Coleridge PS	Speech AD		
Leigh	Pender PS	Calculus	Winside PS	Career Ed
	Allen PS	Finite	Lyons-Decatur Northeast	Acct Adv
	Lyons-Decatur PS	Accounting AD		
	Emerson-Hubbard PS	Busns Law		
	Emerson-Hubbard PS	Busns Comm		
Lewiston	Sterling PS	Spanish II	Sterling PS	Spanish I
	Sterling PS	Spanish I	Sterling PS	Spanish II
Litchfield	Pleasanton PS	Spanish I		
	Pleasanton PS	Spanish II		
	Pleasanton PS	Psychology		
	Pleasanton PS	Health Rel Occ		
Logan View	Metropolitan CC	College Algebra	Wisner-Pilger PS	World History
	Dodge PS	Psychology	Dodge PS	Psychology
			Metro Tech. College	College Algebra
			Metro Tech. College	Trigonometry
Loup City	Sandhills PS	Calculus	Sandhills PS	Calculus
Loup County	Arcadia PS	Biology III (Anatomy)	Sandhills PS	Calculus
			Arcadia PS	Anatomy

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Lynch	Niobrara PS	Spanish I		
	Niobrara PS	Spanish II		
Lyons-Decatur	Wakefield PS	Adult Living	Wakefield PS	Parenting
			Northeast Coll-Norfolk	Calculus
			Wakefield PS	Adult Living
Madison	Newman Grove PS	Ag Business		
	Tech Acad Northeast	Web Page Design II		
Maxwell	North Platte CC	College Algebra	North Platte Coll	College Algebra
	McCook CC	Expository Writing II	McCook Coll	Exp Writing II
	McCook CC	Expository Writing I	McCook Coll	Exp Writing I
			Hershey PS	Calculus
			McCook Coll	Psychology
Mc Cook			North Platte Coll	Elem Statistics
			Culbertson PS	German II
			Culbertson PS	German I
McPherson Co High	Wheatland PS	Spanish I	Wheatland PS	Spanish I
	McCook CC	College English	Wheatland PS	Spanish II
	Wheatland PS	Spanish II		
Mead	Wayne PS	Personal Finance	Leigh PS	Network Systems
			Winnebago PS	Spanish I
			Raymond Central PS	Coll Accounting
Medicine Valley	Wallace PS	Statistics	Wheatland PS	Spanish II
	Wheatland PS	Spanish I	Wheatland PS	Spanish I
	Wheatland PS	Spanish II		
	Wallace PS	Math, Other		
Meridian	Shickley PS	Livestock Prod	Shickley PS	Animal Science
Minatare	ESU #13	Spanish II	ESU #13	Spanish I
	ESU #13	Spanish I	ESU #13	Spanish II
Minden	Franklin PS	French II	Franklin PS	French I
			Minden PS	Math Oth
			Wilcox-Hildreth PS	Ag/Nr-Intro
			Minden PS	Appl Psychology
			Minden PS	Bus Comp Ap
			Minden PS	Physical Ed Oth
			Minden PS	Parenting
Mullen	Mid-Plains CC-McCook	Psychology	Mid-Plains Coll-McCook	Psychology
			Mid-Plains Coll-McCook	Exp. Writing II
			Mid-Plains Coll-McCook	Exp. Writing

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Nebr Unif Dist No 1	Niobrara PS	Spanish II	Niobrara PS	Spanish II
	Stuart PS	Spanish I	Niobrara PS	Spanish I
	West Boyd Unif-Butte	Ag/NR-Intro	Elgin PS	Ag Bus Mgt
	Niobrara PS	Business Math	Elgin PS	Psychology
	Niobrara PS	Spanish I	Nebr Unif-Verdigre	Accounting Ad
Neligh-Oakdale			Norfolk PS	Ag/Nr-Intr
Newcastle	Oakland-Craig PS	Psychology	Mead PS	Marine Biology
			Dodge PS	Psychology
Newman Grove	Pierce PS	Statistics	Pierce PS	Statistics
Niobrara	Lynch PS	Writing		
	Nebr Unif-Royal	Physics		
	Nebr Unif-Royal	Biology II		
	West Boyd Unified	Animal Science		
	Nebr Unif-Royal	Pre-Calculus		
North Bend Central	Metro CC-Omaha	Literature	Wayne PS	Psychology
			Metro College-Omaha	English III
			Metro College-Omaha	British Literature
North Loup-Scotia	Palmer PS	Spanish II	Palmer PS	Spanish II
	Palmer PS	Spanish I	Palmer PS	Spanish I
Oakland Craig	Tekamah-Herman PS	Agri Other	Tekamah-Herman PS	Natural Res Mgt
	Tekamah-Herman PS	PI Soil Sc	Tekamah-Herman PS	Leader
	Tekamah-Herman PS	Ag/Nr-Intr		
Osceola	David City PS	Busns Law	David City PS	Bus & Cons Law
Palmer	Central CC-Columbus	English Comp I		
	Central CC-Columbus	Intro to Literature		
Pawnee City	Southeast Nebr PS	Writing		
	Southeast Nebr PS	Reading		
Paxton	Arnold PS	Psychology	Mid Plains Coll-No Platte	Math, Other
	North Platte CC	Statistics	Mid Plains Coll-No Platte	Math, Other
Pender	Lyons-Decatur PS	Accounting II	Laurel-Concord	Computer Ap
	Hartington PS	Parenting	Logan View PS	Netsys
	Tekamah-Herman PS	Netsys	Hartington PS	Parenting
			Raymond Central PS	Accounting II
Pleasanton	Centura PS	American Literature	Holdrege PS	Physiology
	Sumner-Eddyville-Miller	Writing	Centura PS	English Other
			Centura PS	American Literature
Pope John XXIII High	Northeast CC-Norfolk	American History II		
	Northeast CC-Norfolk	Intro to Internet		
Prague	North Bend Central	Leader	Coleridge PS	Spanish II
	Coleridge PS	Spanish I	Coleridge PS	Spanish I
	Coleridge PS	Spanish II		
	North Bend Central	Ag Bus Mgt		

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Randolph	Plainview PS	Psychology		
	Plainview PS	Sociology		
	UNL Ind Study HS	English II		
Ravenna	Minden PS	Accounting AD	Pleasanton PS	Psychology
	Pleasanton PS	Psychology	Pleasanton PS	Spanish III
	Cozad PS	Accounting Beg	Pleasanton PS	Spanish II
			Pleasanton PS	Sociology
			Minden PS	Accounting Ad
Red Cloud	Doniphan-Trumbull PS	Accounting AD	Blue Hill PS	German I
	Blue Hill PS	German II	Blue Hill PS	German II
Rising City	Lakeview HS	Earth Science	Central Coll-Columbus	English Comp
	Columbus PS	German I		
	Lakeview HS	Genetics		
	David City PS	Zoology		
	David City PS	Business Law		
	Columbus PS	Electronics		
Rushville High			Garden County HS	Spanish I
			Garden County HS	Spanish II
			Chappell PS	Calculus
			Chappell PS	Mathematics Othr
Sandhills	Arcadia PS	Anatomy	Sargent PS	Spanish I
	Broken Bow PS	British Literature	Sargent PS	Spanish II
	Sargent PS	Spanish II	Broken Bow PS	British Literature
	Sargent PS	Spanish I		
	Broken Bow PS	Coll Composition		
Sargent	Sargent PS	Ag/NR Mgt	Loup County PS	Physiology
	Arcadia PS	Physiology	Loup County PS	Spanish II
	Ansley PS	Fam & Cons Sci		
	Sargent PS	Ag/NF Plant		
	Sandhills PS	Calculus		
	Broken Bow PS	Coll Composition		
Scottsbluff			Rushville PS	Hea Rec Oc
Scribner-Snyder	Metro CC-Omaha	English Other	Metro College-Omaha	Intro to Literature
	Metro CC-Omaha	English Oth	Metro College-Omaha	English Comp
			Winside PS	Career Ed
			Metro College-Omaha	English Comp
Shelby	Columbus PS	Electronic	Rising City PS	Biology II
			East Butler PS	Sociology
			Schuyler PS	Calculus
Shelton	Sumner-Eddyville-Miller	English Other	Franklin PS	French II
	Sumner-Eddyville-Miller	American Literature		
Sioux County High			Morrill PS	Spanish II

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
South Central NE Unif	So Cent NE Unif-Superior	Spanish III		
	Blue Hill PS	German II		
Southern Valley	McCook CC	English	Culbertson PS	German II
	Hitchcock County PS	German II	Culbertson PS	German I
Southwest (formally Twin Valley & Republican Valley)			Wallace PS	College Algebra
			Rep/Twin Valley	Spanish II
			Rep/Twin Valley	Spanish I
			Wallace PS	Statistics
Spalding	Fullerton PS	Calculus	Central Coll-Gr Is	Spanish II
	Central CC-Gr Is	Spanish I	Central Coll-Gr Is	Spanish I
	Central CC-Gr Is	Spanish II	Central Coll-Gr Is	Spanish III
			Fullerton PS	Calculus
Spalding Academy	Central CC-Gr Is	Spanish I		
	Central CC-Gr Is	Spanish II		
St Francis	Columbus PS	Elec Occup		
St Paul	Gr Is Central CC	Composition 101		
Stanton	Wayne State Coll	Spanish I	Wayne State College	Spanish I
	Wayne State Coll	Spanish II	Wayne State College	Spanish II
	Elkhorn Valley PS	Calculus		
Stapleton	Callaway PS	Spanish II	Callaway PS	Spanish II
	Wallace PS	College Algebra	Callaway PS	Spanish I
	McCook CC	Writing		
Stuart	Orchard PS	Economics	Keya Paha Co HS	art IV
	Chambers PS	Psychology	Chambers PS	Sociology
	Orchard PS	Business Law	Chambers PS	Psychology
	Chambers PS	Sociology	Lynch PS	Creative Writing
Sumner-Eddyville-Miller	Pleasanton PS	Psychology		
	Pleasanton PS	Health Related OC		
Sutherland	Hershey PS	Composition 102	Hershey PS	Composition 102
	Hershey PS	Composition 101	Hershey PS	Composition 101
Sutton	Hampton PS	Spanish I	Hampton PS	Spanish II
	Hampton PS	Spanish II	Hampton PS	Spanish I
	Clay Center PS	Spanish II		
Tecumseh	Plattsmouth PS	Statistics		
Tekamah-Herman	Allen PS	Finite		
	Allen PS	Statistics		
Thayer Central	Deshler PS	Literature		
	Deshler PS	Writing		
Thedford Rural High			Mullen PS	Spanish II
			Mullen PS	Spanish I
Wakefield	Walthill PS	Literature		

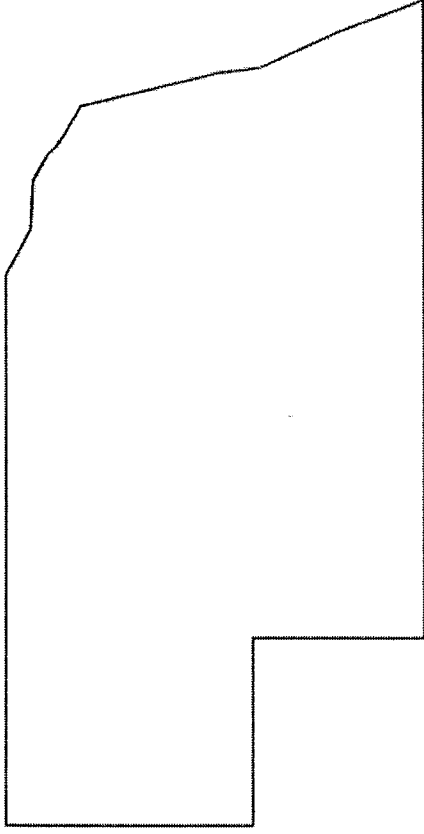
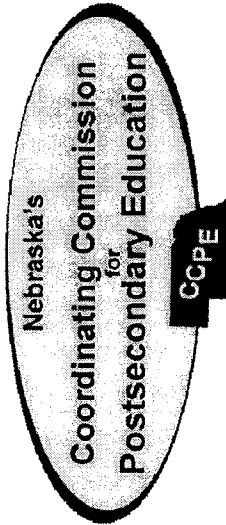


School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Wallace	McCook CC-McCook	American Literature	McCook College	American Literature
	McCook CC-McCook	Writing	McCook College	Writing
Walthill	Winnebago PS	Spanish I	Winnebago PS	Spanish I
Wauneta/Palisade	Mid-Plains CC-McCook	Coll Composition	McCook College	Psychology
	Mid-Plains CC-McCook	Literature		
	Mid-Plains CC-McCook	Intro to Psychology		
	Chase County HS	Trig/Analytic Geo		
Wausa			Bloomfield PS	Spanish I
			Niobrara PS	Applied Math I
			Niobrara PS	Applied Math II
			Osmond PS	American Literature
			Osmond PS	British Literature
		Verdigre PS	Biology II	
Wayne	Mead PS	Ag Issues	Mead PS	Ag Business Intro
	Mead PS	Ag Literacy	Mead PS	Entrepreneurship
	Mead PS	Animal Care		
West Boyd Unif	Chambers PS	Sociology	Chambers PS	Psychology
	West Holt PS	Spanish II	West Holt HS	Spanish I
	Chambers PS	Psychology	West Holt HS	Spanish II
			Chambers PS	Sociology
			West Holt PS	Spanish II
West Holt Rural High	Chambers PS	Sociology CC	Chambers PS	English Comp II
	Chambers PS	Psychology CC	Spencer-Naper	Family Health
			Chambers PS	Psychology-College
			Chambers PS	Sociology-College
Wheatland	ESU #15	Spanish I	ESU #15	Spanish II
	ESU #15	Spanish II	ESU #15	Spanish I
Wheeler Central			Keya Paha Co HS	Art III
			Keya Paha Co HS	Art 4
			Kansas State Univ	Spanish I
			Kansas State Univ	Spanish II
			Ewing PS	PreCalculus
Wilcox-Hildreth	Bertrand PS	Psychology		
	Pleasanton PS	Spanish III		
Winnebago	Homer PS	Trigonometry		
	Umo Ho Nation PS	Writing		
Winside	Wayne State Coll	Spanish I	Wayne State College	Spanish II
	Wayne State Coll	Spanish II	Mead PS	Small Animal
	Wayne State Coll	Spanish II	Wayne State College	Spanish II
	Wayne State Coll	Spanish I	Wayne State College	Spanish I
		Wayne State College	Spanish I	

School	2004-05		2003-04	
	Sending From:	Course	Sending From:	Course
Wynot	Butte PS	Intro Agriculture		
	Mead	Marine Biology		
	Allen PS	Discrete Math		
Yutan	Hartington PS	Parenting	Hartington PS	Parenting
			Mead PS	Agriculture Other
			Mead PS	Science - Other
			Tekamah-Herman PS	Natural Res Mgt

**August 2005**

A Report by the  
Coordinating  
Commission for  
Postsecondary  
Education



***Delivering Courses Beyond the Campus  
Walls***

**Courses Offered in High Schools**

for

**LB 689  
Distance Education Enhancement  
Task Force**

**Courses Offered in High Schools to High School Students and Number of Students Served  
2003-2004**

Institution	Number of Courses	Number of Students
CCC		
MCC	69	828
MPCC		
NeCC	173	1,412
SCC	46	563
WNCC	66	501
<b>Community College Total</b>	<b>354</b>	<b>3,304</b>
CSC	2	15
PSC	60	521
WSC	1	2
<b>State College Total</b>	<b>63</b>	<b>538</b>
University of Nebraska		
<b>Totals</b>	<b>417</b>	<b>3,842</b>

*NOTE:* The University of Nebraska system did not separate their high school offerings from other distance courses. In addition, Central and Mid-Plains Community Colleges did not indicate courses for high school students, although both offered them in previous years.

For additional information on distance education courses, contact:  
 Dr. Kathleen Fimple  
 402-471-0030  
 kathleen.fimple@cccpe.ne.gov



## FOCUS ON HIGH SCHOOLS - 2002-2003

- Approximately 4,721 high school students (duplicated headcount) enrolled in college courses offered in high schools in 2002-2003. The 2002-2003 figures represent a significant increase over 2000-2001.
- These figures do not include high school students who enroll in asynchronous courses or who enroll in college courses independent of the high school offerings.
- Courses were made available to high school students in 74 counties at 161 locations across the state. Most courses were delivered by the traditional method, but a few were delivered synchronously.
- Over eighty percent of the high school students enrolled in courses offered by the community colleges. The remaining courses were offered by the state colleges. The course offerings in 2002-2003 were more diverse than in the past. Included were courses in precision production, mechanics and repair, family and consumer sciences, and engineering technologies—all fields that were reported for the first time in 2002-2003
- The majority of courses were offered in Liberal Arts. However, many of the community colleges report all of their academic transfer courses under this category, which therefore represents a wide range of courses. Individual analysis of this category shows that English and Language Arts were the most offered courses (183), followed by social sciences (151) and math (113).

## SUMMARY OF HIGH SCHOOL OFFERINGS, 1997-2004

	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04 *
High School courses	222	248	279	386	no data	608	417 *
enrollments		2,334	2,848	4,151	no data	4,721	3,842 *

\* These numbers are significantly lower than the actual number of high school courses and students. The University of Nebraska system did not separate their high school offerings from other distance courses. In addition, Central and Mid-Plains Community Colleges did not indicate courses for high school students, although both offered them in previous years.

**College Courses Delivered in High Schools Primarily for High School Students<sup>1</sup>  
By Program and Institution, 2002-2003**

CIP	Chadron State		Peru State		Wayne State		State College Totals	
	Courses	Students	Courses	Students	Courses	Students	Courses	Students
13 Education			48	571			48	571
23 English	5	147					5	147
27 Mathematics	2	55					2	55
30 Interdisciplinary Studies			4	42			4	42
31 Parks, Recreation, Leisure and Fitness Studies					1	2	1	2
42 Psychology			8	80			8	80
52 Business, Management, & Marketing			3	6			3	6
Totals	7	202	63	699	1	2	71	903

<sup>1</sup> Due to the difficulty in compiling this information, some of the data may be under reported.

**College Courses Delivered in High Schools Primarily for High School Students<sup>1</sup>  
By Program and Institution, 2002-2003**

CIP	Central		Metro		Mid-Plains		Northeast		Southeast		Western		Community College Totals	
	Courses	Students	Courses	Students	Courses	Students	Courses	Students	Courses	Students	Courses	Students	Courses	Students
01 Agricultural Business							3	7					3	7
11 Computer & Information Sciences			4	35			2	3			12	49	18	87
15 Engineering Technologies			5	8							1	1	6	9
19 Family & Consumer Sciences					2	4							2	4
24 Liberal Arts	55	401	26	371	68	279	169	1,419	86	480	36	315	440	3,265
32 Personal Improvement - Basic Skills			10	139									10	139
43 Security and Protective Services			3	36							2	8	5	44
47 Mechanics and Repair	1	2											1	2
48 Precision Production			3	18			2	26			15	84	20	128
50 Visual and Performing Arts							2	23					2	23
51 Health Professions											6	37	6	37
52 Business, Management, and Marketing					4	10	19	49					23	59
54 History									1	14			1	14
Totals	56	403	51	607	74	293	197	1,527	87	494	72	494	537	3,818

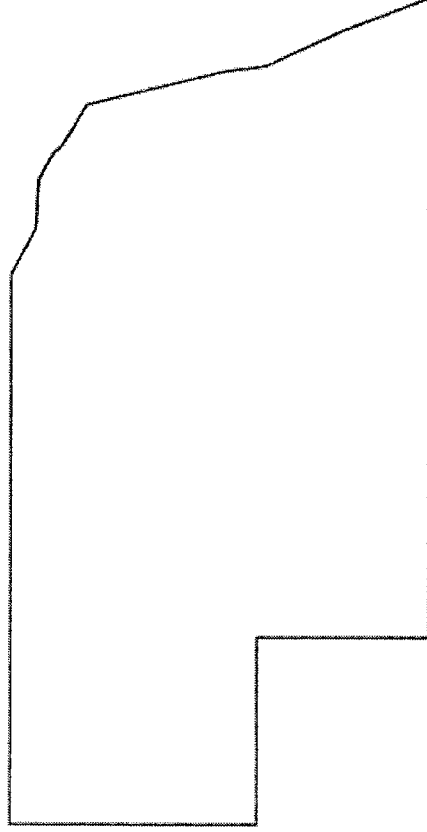
**College Courses Delivered in High Schools Primarily for High School Students<sup>1</sup>  
By Program and Institution, 2002-2003**

CIP	State College Totals		Community College Totals		State Totals	
	Courses	Students	Courses	Students	Courses	Students
01 Agricultural Business			3	7	3	7
11 Computer & Information Sciences			18	87	18	87
13 Education	48	571			48	571
15 Engineering Technologies			6	9	6	9
19 Family & Consumer Sciences			2	4	2	4
23 English	5	147			5	147
24 Liberal Arts			440	3,265	440	3,265
27 Mathematics	2	55			2	55
30 Interdisciplinary Studies	4	42			4	42
31 Parks, Recreation, Leisure and Fitness Studies	1	2			1	2
32 Personal Improvement - Basic Skills			10	139	10	139
42 Psychology	8	80			8	80
43 Security and Protective Services			5	44	5	44
47 Mechanics and Repair			1	2	1	2
48 Precision Production			20	128	20	128
50 Visual & Performing Arts			2	23	2	23
51 Health Professions			6	37	6	37
52 Business, Management, and Marketing	3	6	23	59	26	65
54 History			1	14	1	14
<b>Totals</b>	<b>71</b>	<b>903</b>	<b>537</b>	<b>3,818</b>	<b>608</b>	<b>4,571</b>



**July 2005**

A Report by the  
Coordinating  
Commission for  
Postsecondary  
Education



***Delivering Courses Beyond  
Campus Walls***

Prepared for

LB 689

Distance Education Enhancement  
Task Force

## Delivering Courses Beyond Campus Walls

### **How are courses offered beyond campuses?**

- Traditional delivery---instructor and students are in the same time and place away from the campus; for example, the instructor drives to a different town or a location in the community other than the campus to meet face-to-face with students
- Synchronous (“same time”) delivery---instructor and students are in the same time, but not the same place; for example, two-way interactive video, where the instructor is in one location, often on the campus with students in a classroom, and delivers the course at the same time by video to other students at a “receiving” site or sites
- Asynchronous (“any time”) delivery---instructor and students are in a different time and place; for example, a course on CD-ROM or an Internet-based course where students work on their own and have no regular, specified time for contact with the instructor or with other students

### **Which Nebraska institutions offer courses at distance?**

- All six community colleges, the three state colleges, and the University of Nebraska campuses (with the exception of NCTA at Curtis) all offer courses at distance (Table I).
- Private institutions in Nebraska also offer courses at distance; Bellevue University is perhaps the most well-known in this regard. CCPE has no data on the distanced courses offered by private institutions.

### **How has distance delivery changed over time?**

- With the increasing availability of technological means of delivery, the number of synchronous and (especially) asynchronous courses is growing, accompanied by a decline in traditionally delivered courses (Graph 1).
- The number of asynchronous courses first surpassed synchronous courses in 2000-2001 and has been increasing rapidly since then.

### **What is the current status of distance delivery in Nebraska?**

- We're increasingly relying on technology. In 2003-2004, five institutions were delivering more courses using synchronous and asynchronous technology than the face-to-face traditional delivery; several others were approaching that mark (Table I).

- Most institutions make about five to seven percent of the courses they offer on campus available through synchronous and/or asynchronous technology. Three institutions exceeded nine percent; the University of Nebraska Medical Center offered over 13 percent of its courses to off-campus locations in Nebraska and around the country.

***What courses are offered at distance?***

- Almost every type of course is offered at distance, including courses requiring hands-on activities (e.g., biology, nursing, mechanics). (Table II).
- More courses were offered in liberal arts and sciences than any other discipline. This large number comes from the community college's practice of reporting most academic transfer courses under this single category.
- Large numbers of courses were also offered in business, education, health professions, and computer and information sciences.

***How many students are served by distance technology?***

- In 1998-99, the first year the Commission collected enrollment data, there were 7,512 students enrolled in courses offered either synchronously or asynchronously (Graph 2).
- In 2003-2004 that number had grown to 29,991 (Table III).

***When are distance courses offered?***

- Courses are offered throughout the year, including summer.
- The number and types of courses offered during any one semester or quarter is determined by the institution and its students' needs.

***Where are the distance courses offered?***

- Most asynchronous courses are available anywhere a student has access to a computer, including his or her home or work place.
- Most synchronous courses require a location capable of receiving a live transmission from the campus. Many high schools and public buildings have this capability.
- Synchronous courses are offered in the majority of Nebraska counties, although this number has declined, as the popularity of asynchronous courses has increased (Map). The numbers on the map are from 2002-2003. They

represent a decline from 2001-2002; it is likely the map of 2003-2004 data will also show a decline since asynchronous courses are gaining rapidly in popularity.

***Are degree programs or other awards available entirely by distance technology?***

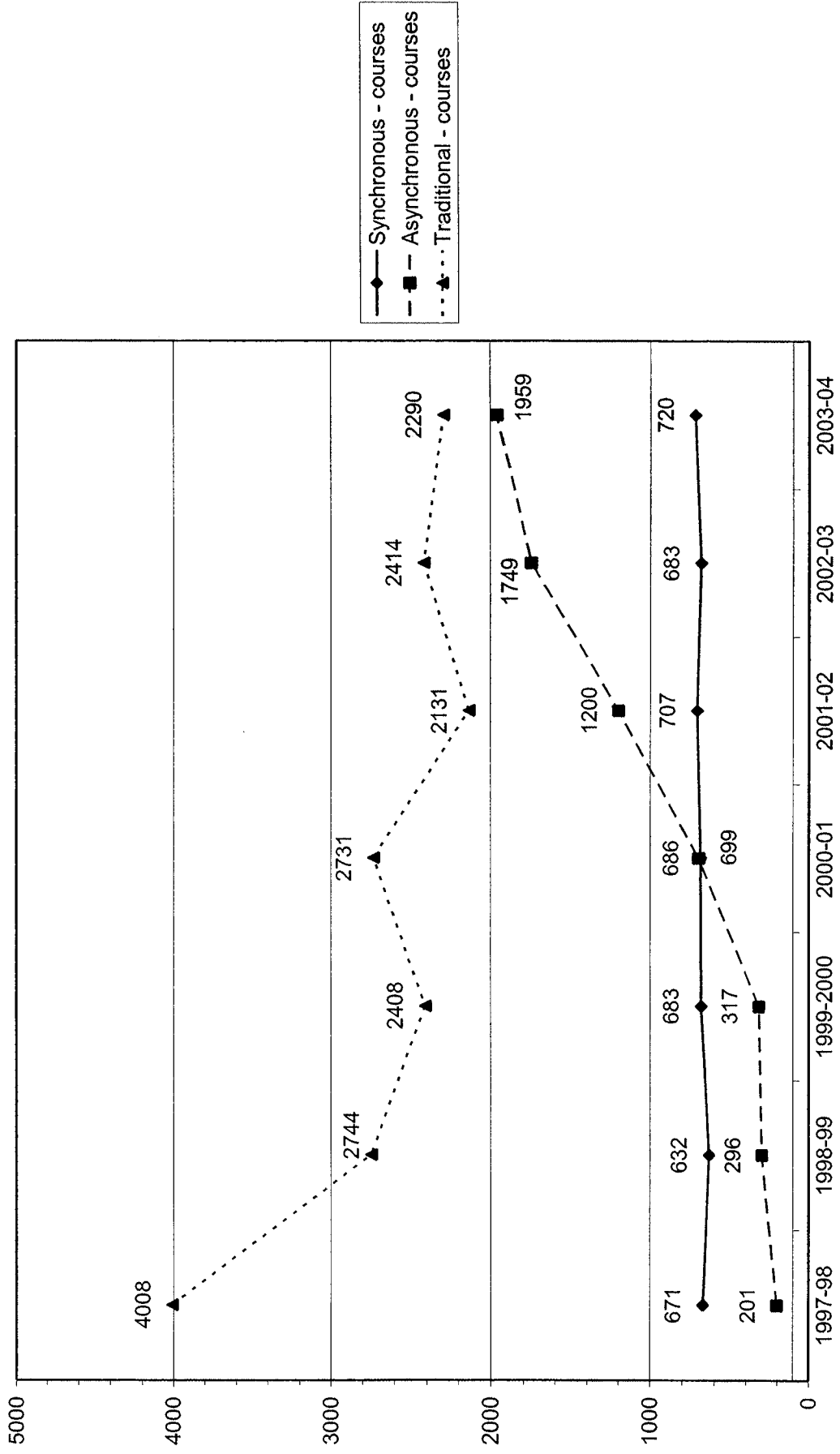
- Nebraska public institutions offered 36 degrees or awards entirely by distance technology in 2003-2004. This is more than triple the number available by distance in 1998-99 (Graph 3).
- In 2003-2004 the distance offerings included two associate degrees, ten bachelor's degrees, 18 master's degrees, two education specialist degrees, three teaching endorsements, and one certificate.
- In addition to the 36 degrees available at a distance, there are many other degrees available entirely by traditional delivery at an off-campus site, or by a combination of distance and traditional delivery.

**Table I**  
**Summary of Delivery Methods and Number of Courses**  
**2003-2004**

Institution	# Synchronous Courses	# Asynch Courses	Total Synch & Asynch	% S & A of all courses	# Traditional Courses
NCTA	n/a	n/a	n/a	n/a	n/a
UNK	37	98	135	5.5%	59
UNL	4	277	281	2.4%	58
UNMC	72	74	146	13.4%	9
UNO	40	95	135	2.4%	152
<b>UNIVERSITY TOTALS</b>	<b>153</b>	<b>544</b>	<b>697</b>	<b>3.3%</b>	<b>278</b>
CHADRON STATE	95	91	186	5.4%	114
PERU STATE	0	85	86	9.7%	218
WAYNE STATE	26	123	149	9.0%	151
<b>STATE COLLEGES TOTALS</b>	<b>121</b>	<b>299</b>	<b>421</b>	<b>7.0%</b>	<b>483</b>
CENTRAL CC	99	152	151	1.5%	n/a
METRO CC	45	399	444	7.6%	913 *
MID-PLAINS CC	91	45	136	5.0%	113
NORTHEAST CC	112	135	247	9.4%	291
SOUTHEAST CC	31	345	376	5.8%	22
WESTERN CC	68	40	108	7.3%	190
<b>COMMUNITY COLLEGE TOTALS</b>	<b>446</b>	<b>1116</b>	<b>1462</b>	<b>5.0%</b>	<b>1529</b>
<b>GRAND TOTALS</b>	<b>720</b>	<b>1959</b>	<b>2580</b>	<b>4.6%</b>	<b>2290</b>

\* includes courses at Sarpy Center and Fremont Center

**Changes in Distance Education Courses Offered by Nebraska Public Institutions  
1997-2004**



**Table II**  
**Number of Distance Education Courses by Discipline**  
**(Traditional, Synchronous, and Asynchronous Delivery)**

The five disciplines with the greatest number of courses are indicated with superscript.

Discipline	2 digit CIP <sup>1</sup>	University Subtotals			State College Subtotals			Community College Subtotals			2003-2004 Subtotals			2003-04 Totals
		S	A	T	S	A	T	S	A	T	S	A	T	
		Agricultural Business & Production	01	1						2	7		1	
Agricultural Sciences	02		18		3						3	18		21
Natural Resources & Conservation	03							3				3		3
Architecture & Related Services	04	1					4				1		6	7
Area, Ethnic, Cultural, & Gender Studies	05			12									12	12
Communications & Journalism	09	2	30	1			2				4	30	3	37
Computer & Information Sciences	11	1	6	6	1	1		91	283		2	98 <sup>2</sup>	289	389
Education	13	20	214	98	56	135	288				76 <sup>3</sup>	349 <sup>3</sup>	386	811
Engineering	14	26	5	1							26	5	1	32
Engineering Technologies/Technicians	15	2				5		1	27	43	3	32	47	82
Foreign Languages, Literatures & Linguistics	16	2	2	9	3		2				5	2	11	18
Family & Consumer Sciences/ Human Services	19	3	21	1	2	2	4	16	8	13	21	31	18	70
Vocational Home Economics	20							37	10			37	10	47
Technical Ed / Industrial Arts	21				1						1			1
Legal Professions & Studies	22							5	4	2	5	4	2	11
English Language & Literature/Letters	23		13	29	4	5	34				4	18	63	85
Liberal Arts & Sciences / General Studies <sup>2</sup>	24					6	4	281	516	667	281 <sup>1</sup>	522 <sup>1</sup>	671	1474
Biological & Biomedical Sciences	26		23	16		1						24	16	40

<sup>1</sup> CIP – Classification of Instructional Programs. (a national organizational structure)

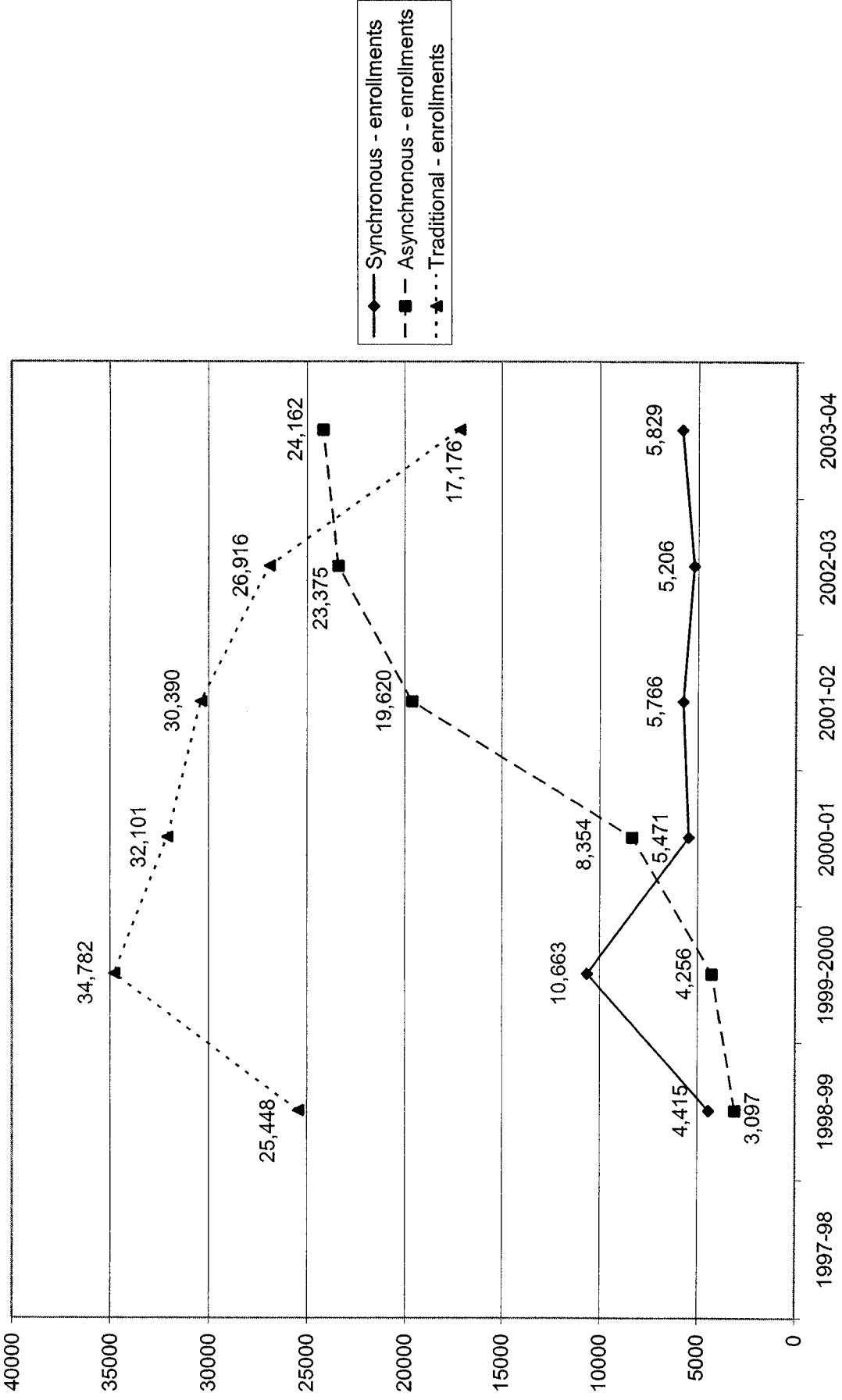
<sup>2</sup> The community colleges report all of their academic transfer courses under this CIP number.

Discipline	2 digit CIP	University Subtotals			State College Subtotals			Community College Subtotals			2003-2004 Subtotals			2003-04 Totals	
		S	A	T	S	A	T	S	A	T	S	A	T		
Mathematics & Statistics	27	1		10	2	27						3	27	27	57
Reserve Officers' Training Corps	28													9	9
Multi/Interdisciplinary Studies	30					8							8	1	9
Parks, Recreation, Leisure & Fitness Studies	31													1	1
Personal Improvement – Basic Skills	32								2	4	24	2	4	24	30
Health-Related Knowledge & Skills	34	1		6								1		6	7
Philosophy & Religion Studies	38		1	10									1	10	11
Physical Sciences	40		5	1	6	4						6	9	6	21
Sciences Technologies / Technicians	41								5		2		5	2	7
Psychology	42		13	8	13	18						13	31	42	86
Security & Protective Services	43	2	1	10	7				24	9	9	33 <sup>5</sup>	10	23	66
Public Administration & Social Services	44		18	13					1				18	13	32
Social Sciences	45	1	15	28	2	4	30					3	19	58	80
Construction Trades	46													11	11
Mechanics & Repair Technologies	47													11	11
Precision Production	48													21	21
Transportation & Materials Moving	49	1	22						1		13	2	22	13	37
Visual & Performing Arts	50		4	4		1	5		4	10	4	4	15	13	32
Health Professions & Related Clinical Sciences	51	71	84	3					61	127	231	132 <sup>2</sup>	211 <sup>4</sup>	234	577
Business Management & Admin. Services	52	3	35	41	24	79	41		48	265	167	75 <sup>4</sup>	379 <sup>2</sup>	249	703
High School / Secondary Diploma & Certificate	53									8			8		8
History	54						3							3	3
<b>TOTAL</b>		<b>138</b>	<b>530</b>	<b>307</b>	<b>124</b>	<b>296</b>	<b>483</b>	<b>446</b>	<b>1116</b>	<b>1529</b>	<b>708</b>	<b>1942</b>	<b>2319</b>	<b>4969</b>	



Graph II

Changes in Distance Education Enrollments in Nebraska



\* Enrollment information is not available for 1997-98.

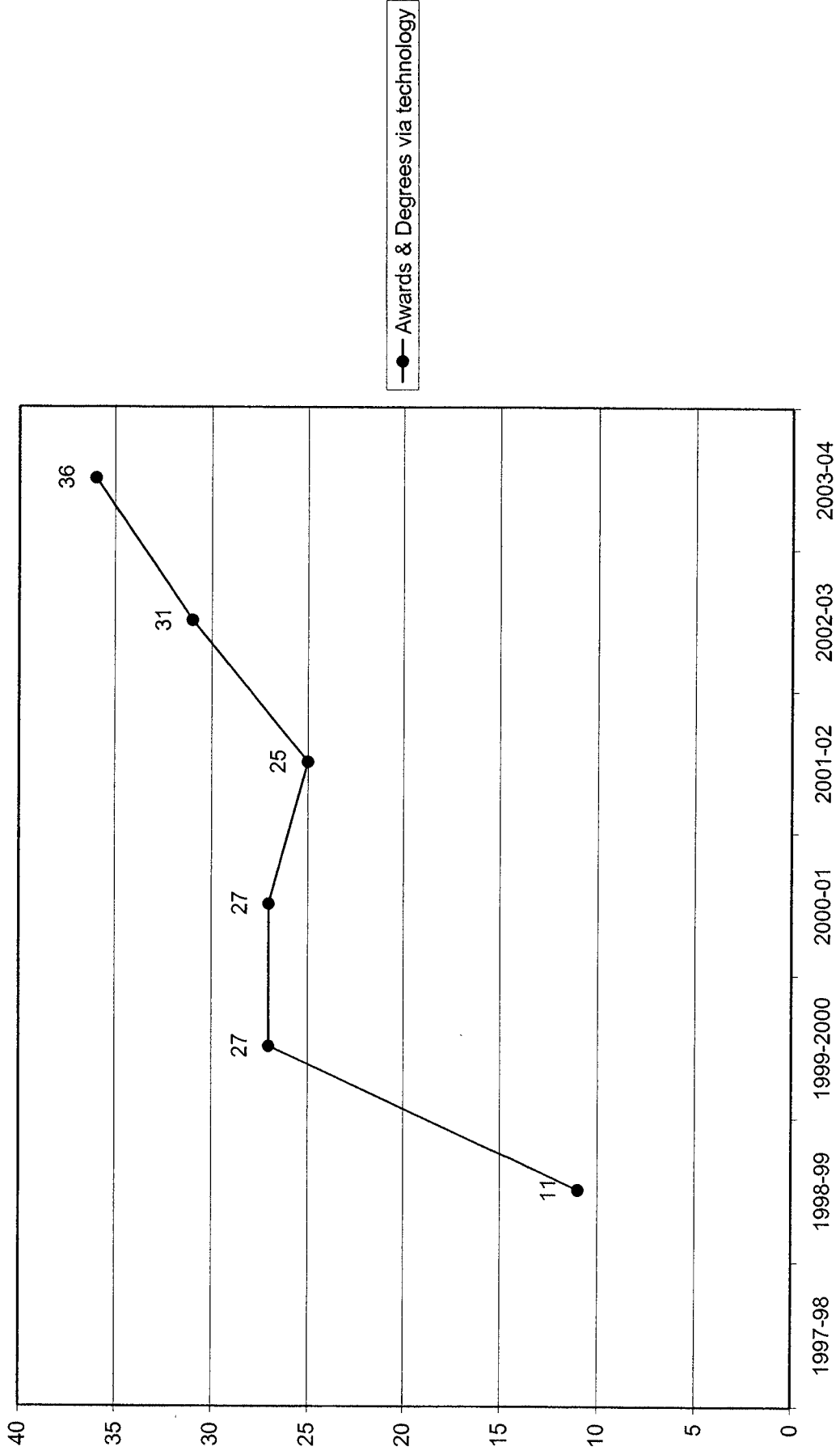
**Table III**  
**Estimate of the Number of Nebraska Students Served by Distance Learning**  
**2003-2004**

Institution	Synchronous (Receiving)	Asynchronous	Total
NCTA	n/a	n/a	n/a
UNK	328	1753	2081
UNL	18	3183	3201
UNMC	750	1247	1997
UNO	218	1671	1889
<b>UNIVERSITY TOTALS</b>	<b>1314</b>	<b>7854</b>	<b>9168</b>
CHADRON STATE	648	1298	1946
PERU STATE	0	1930	1930
WAYNE STATE	227	1552	1779
<b>STATE COLLEGES TOTALS</b>	<b>875</b>	<b>4780</b>	<b>5655</b>
CENTRAL CC	1090	1632	2722
METRO CC	45	399	444
MID-PLAINS CC	1010	284	1294
NORTHEAST CC	730	1733	2463
SOUTHEAST CC	326	6850	7176
WESTERN CC	439	630	1069
<b>COMMUNITY COLLEGE TOTALS</b>	<b>3640</b>	<b>11,528</b>	<b>15,168</b>
<b>GRAND TOTALS</b>	<b>5829</b>	<b>24,162</b>	<b>29,991</b>



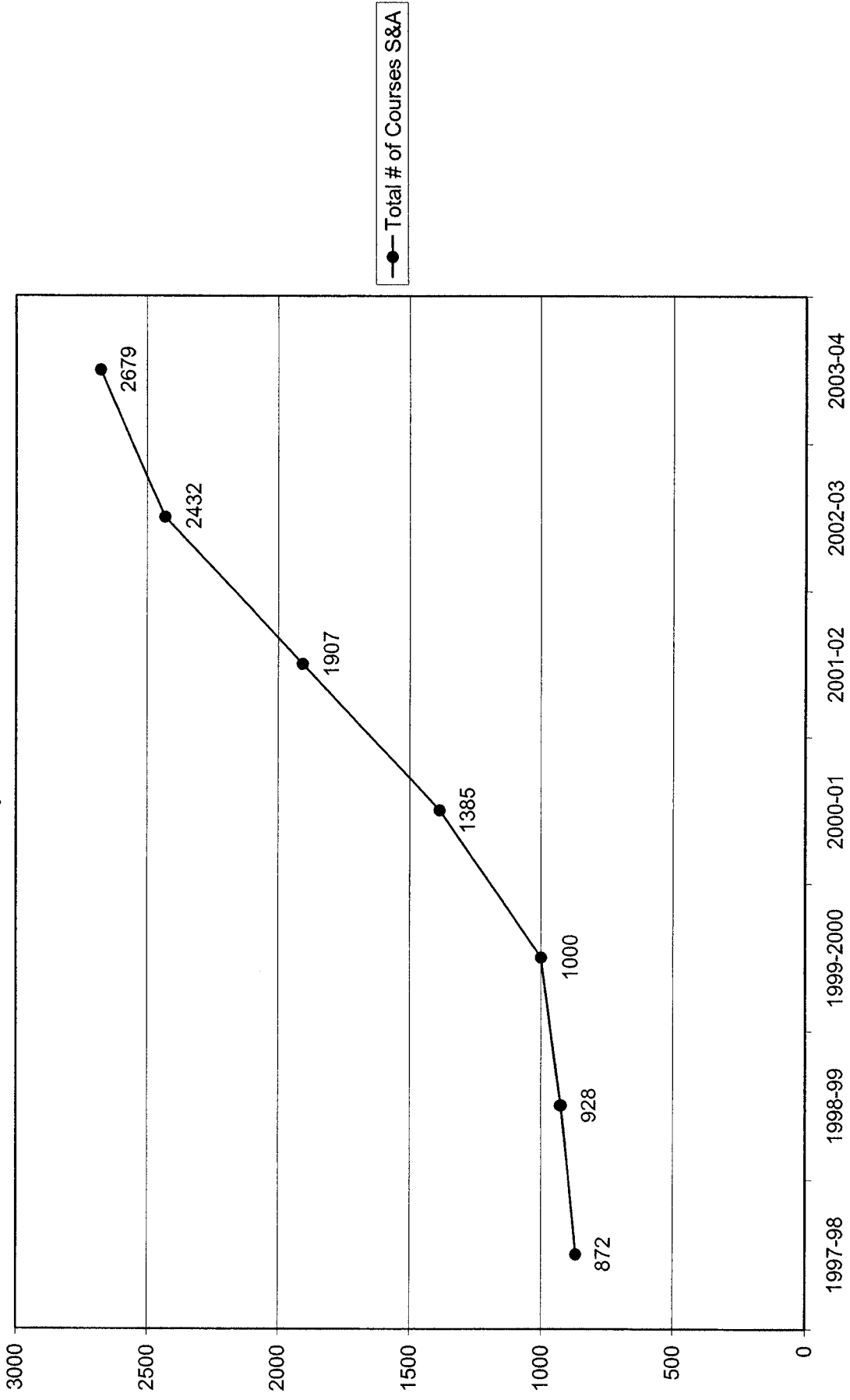
Graph III

Awards & Degrees Available from Nebraska Public Institutions via Technology



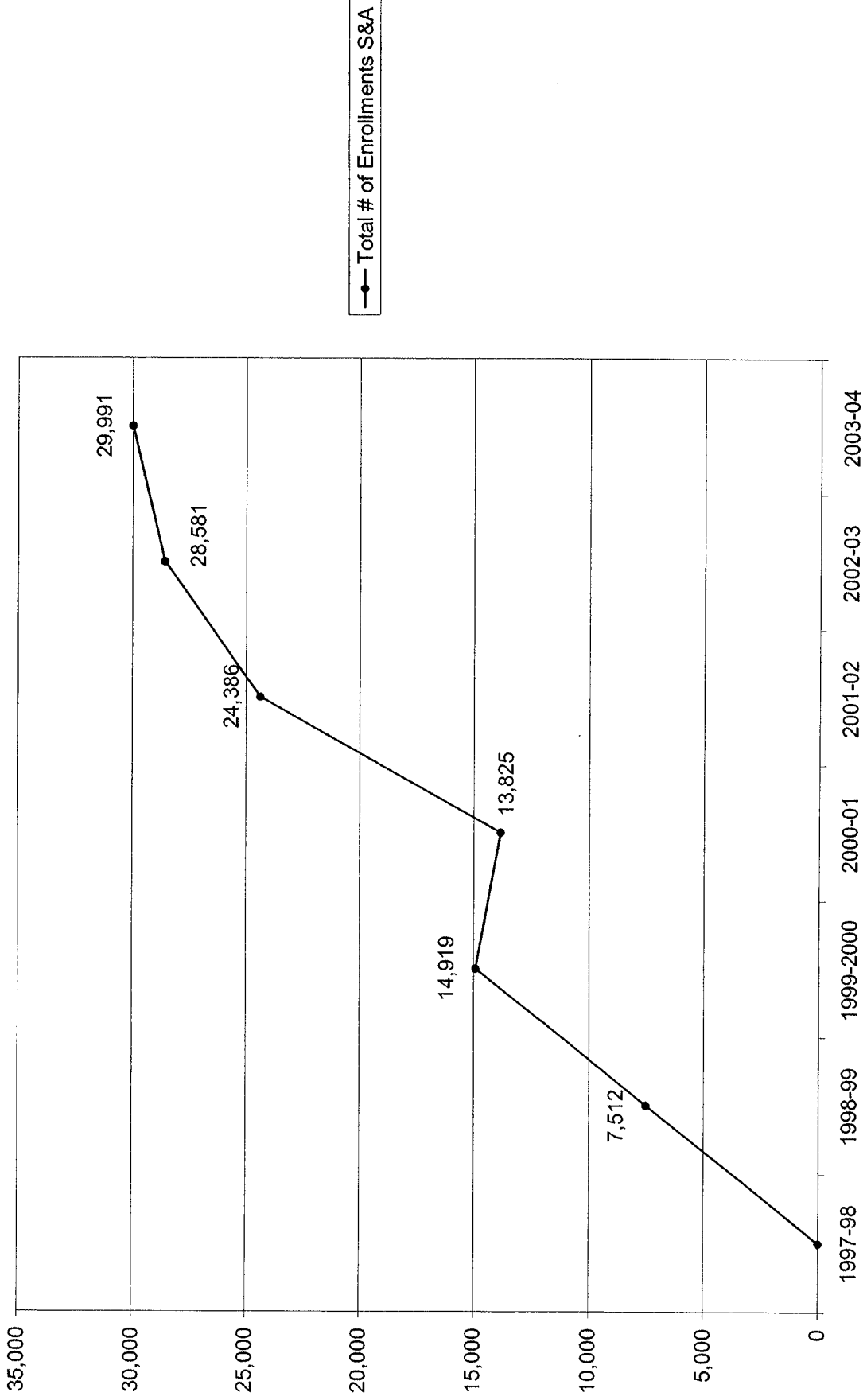
Graph IV

**Total Number of Courses, Synchronous & Asynchronous,  
Offered by Nebraska Public Institutions**



Graph V

**Total Number of Enrollments in Synchronous & Asynchronous Courses Offered by Nebraska Public Institutions**



**Appendix H: Lottery Proceeds to the Education Innovation  
Fund**

**LOTTERY PROCEEDS TO THE  
EDUCATION INNOVATION FUND**

	<b>2000-01</b>	<b>2001-02*</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>
<b>Lottery Distribution</b>	49.5% - Environmental Trust 49.5% - Educ. Innovation Fund	49.5% - Environmental Trust 49.5% - Educ. Innovation Fund	49.5% - Environmental Trust 49.5% - Educ. Innovation Fund	49.5% - Environmental Trust 24.75% - NE Scholarship Fund 24.75% - Educ. Innovation Fund	44.5% - Environmental Trust 22.25% - NE Scholarship Fund 22.25% - Educ. Innovation Fund 10.0% - State Fair Cash Fund	44.5% - Environmental Trust 22.25% - NE Scholarship Fund 22.25% - Educ. Innovation Fund 10.0% - State Fair Cash Fund	44.5% - Environmental Trust 22.25% - NE Scholarship Fund 22.25% - Educ. Innovation Fund 10.0% - State Fair Cash Fund
<b>Final Allocation Educ. Innov. Fund</b>	up to 70%-Qual. Ed. Incent. up to 10%-Mentor up to 20%- Compet. Grants Excell. In Ed. Council Exps. Remainder General Fund	up to \$1.5 million-Network Completion Grants Excell. In Ed. Council Exps. Remainder General Fund	up to \$1.5 million-Network Completion Grants Excell. In Ed. Council Exps. Remainder General Fund	Excell. In Ed. Council Exps. Remainder General Fund	Excell. In Ed. Council Exps. Remainder General Fund	Excell. In Ed. Council Exps. Remainder General Fund	Excell. In Ed. Council Exps. Remainder General Fund
<b>Bills</b>		LB 833 (2001)-Took \$1.5 mil. from competitive grants in FY02 & FY03 for network completion grants  LB 3 (2001 Nov Spec Ses)- Removed funds for Qual. Ed. Incentives and Mentor Prog.- Lapsed remainder to Gen Fund after Excell. In Ed. Council exps. and \$1.5 mil. for network completion grants for FY02 & FY03  *Qual. Ed. Incent. Also distributed in this year	LB 1 (2002 2nd Sp Ses)- Diverted proceeds for FY04 and FY05 to Gen Fund after Excell. In Ed. Council exps.	LB 564 (2003)- Reallocated 50% of the Educ. Innovation Fund proceeds to the NE Scholarship Fund  Changed the allocation of Ed. Innov. Fund when it ceases to be diverted to the Gen Fund  New Allocation in FY08: -Up to 20% - Mentor -Up to 40% - Teacher Loan Forgiveness Prog. -Up to 40% - Competitive Grants	LB 1091 (2004)-Allocates \$1 million from Ed. Innov. Fund in FY06 & FY07 for base year incentives  Diverts remainder of funds after Excell. In Ed. Council exps. to Gen Fund for FY06 & FY07  Constitutional Amendment to provide proceeds to the State Fair Board (Article III, Section 24)		

Note: Payment of operating expenses and prizes from lottery funds is the first priority. The next priority is a transfer of \$500,000 to the Compulsive Gamblers Assistance Fund. The Compulsive Gamblers Assistance Fund also receives an additional 1% after the payment of operating expenses and prizes each year.

Estimated Lottery Allocation\*

\$ 700,000 - Compulsive Gamblers Assistance Fund  
 \$ 2,000,000 - State Fair Cash Fund  
 \$ 9,000,000 - Environmental Trust Fund  
 \$ 4,500,000 - NE Scholarship Fund  
 \$ 4,500,000 - Education Innovation Fund  
 \$20,800,000

\* Based on 2003-04 Revenues



**Appendix I: State Aid Technology Allowance Example**

## State Aid Technology Allowance Example Using an Allowance of 85% of Transport and Access Cost

### Example District Statistics

	Students	General Fund Operating Expenditures (GFOE)	Data Transport and Access Costs Post E-Rate	85% of Data Transport and Access Costs (Allowance)	GFOE minus Allowance	Formula Resources	Data Transport and Access Costs as a % of GFOE
District A	395	1,500,000	17,976	15,280	1,484,720	1,200,000	1.20%
District B	3,510	22,500,000	14,076	11,965	22,488,035	15,200,000	0.06%
<u>District C</u>	<u>700</u>	<u>5,200,000</u>	<u>15,204</u>	<u>12,923</u>	<u>5,187,077</u>	<u>5,700,000</u>	<u>0.29%</u>
Totals	4,605	29,200,000	47,256	40,168	29,159,832	22,100,000	0.16%

### Calculation of Equalization Aid without Allowance

	Average GFOE / Student	Needs = Students x Average GFOE / Student	Aid = Needs - Resources
District A	6,341	2,504,669	1,304,669
District B	6,341	22,256,678	7,056,678
<u>District C</u>	<u>6,341</u>	<u>4,438,654</u>	<u>0</u>
Totals		29,200,000	8,361,346

### Calculation of Equalization Aid with Allowance

	Ave. (GFOE - Allowances) / Student	Needs = [Students x (Ave. (GFOE - Allowances) / Student)] + Allowance	Aid = Needs - Resources	Change in Aid
District A	6,332	2,516,503	1,316,503	11,834
District B	6,332	22,238,026	7,038,026	-18,652
<u>District C</u>	<u>6,332</u>	<u>4,445,471</u>	<u>0</u>	<u>0</u>
Totals		29,200,000	8,354,529	-6,818

The change in aid does not equal the allowance, but reflects the differences in the allowances relative to the number of students. If the data transport and access costs were the same on a per student basis between all three districts there would not be a change in aid for any of the districts.

There is a savings in aid under this example because District C has more resources than needs, so it does not receive equalization aid, despite an increase in needs. If all of the districts had needs greater than resources, the total amount of aid would not change.

**Appendix J: E.S.U. Funding**

**State Aid to ESU's  
Core Services & Technology Infrastructure**

<b>Core Services</b>									
<b>ESU</b>	<b>City</b>	<b>State Aid FY99</b>	<b>State Aid FY00</b>	<b>State Aid FY01</b>	<b>State Aid FY02</b>	<b>State Aid FY03</b>	<b>State Aid FY04</b>	<b>State Aid FY05</b>	<b>State Aid FY06</b>
1	Wakefield	396,535.12	398,724.75	391,664.32	391,613.14	360,702.63	310,216.70	303,907.28	310,737.42
2	Fremont	441,098.09	440,114.18	438,874.70	448,348.00	417,620.87	357,957.77	353,317.33	354,144.11
3	Omaha	1,818,723.24	1,832,944.40	1,849,460.62	1,915,179.90	1,800,882.21	1,573,388.12	1,595,371.10	1,647,402.46
4	Auburn	253,231.48	251,989.10	249,233.56	250,023.23	234,394.45	202,569.08	201,556.23	204,075.68
5	Beatrice	242,500.00	242,500.00	242,500.00	248,562.50	234,394.45	202,569.08	201,556.23	204,075.68
6	Milford	421,236.09	416,562.83	416,101.13	425,832.08	390,859.42	339,323.87	334,571.04	335,647.70
7	Columbus	431,135.46	425,291.43	423,425.77	429,029.80	399,008.23	342,247.88	337,603.14	339,160.68
8	Neligh	427,466.69	419,102.06	414,949.66	418,381.71	391,661.95	333,661.92	324,499.20	315,873.84
9	Hastings	335,592.64	333,783.99	330,892.15	334,416.75	312,550.54	268,004.66	263,830.82	261,316.08
10	Kearney	891,597.77	888,922.79	886,573.64	918,050.68	856,885.21	744,378.71	740,846.12	739,002.50
11	Holdrege	242,500.00	242,500.00	242,500.00	248,562.50	234,394.45	202,569.08	201,556.23	204,075.68
13	Scottsbluff	384,994.29	379,063.83	373,899.66	371,788.91	403,366.30	338,845.93	327,954.74	529,510.97
14	Sidney	242,500.00	242,500.00	242,500.00	248,562.50	234,394.45	202,569.08	201,556.23	0.00
15	Trenton	242,500.00	242,500.00	242,500.00	248,562.50	234,394.45	202,569.08	201,556.23	204,075.68
16	Ogallala	310,944.17	308,757.04	304,624.19	304,234.86	279,057.06	236,093.89	238,320.05	241,293.38
17	Ainsworth	242,500.00	242,500.00	242,500.00	248,562.50	234,394.45	202,569.08	201,556.23	204,075.68
18	Lincoln	970,793.34	979,382.79	984,064.99	1,023,278.85	966,307.75	840,605.15	839,508.03	850,114.03
19	Omaha	1,404,151.62	1,412,860.81	1,423,735.61	1,469,509.59	1,390,509.13	1,202,623.92	1,193,182.77	1,218,445.43
<b>Total</b>		<b>9,700,000.00</b>	<b>9,700,000.00</b>	<b>9,700,000.00</b>	<b>9,942,500.00</b>	<b>9,375,778.00</b>	<b>8,102,763.00</b>	<b>8,062,249.00</b>	<b>8,163,027.00</b>

<b>Technology Infrastructure</b>									
<b>ESU</b>	<b>City</b>	<b>State Aid FY99</b>	<b>State Aid FY00</b>	<b>State Aid FY01</b>	<b>State Aid FY02</b>	<b>State Aid FY03</b>	<b>State Aid FY04</b>	<b>State Aid FY05</b>	<b>State Aid FY06</b>
1	Wakefield		123,316.93	124,161.63	124,145.40	114,346.44	96,296.71	94,338.17	96,458.36
2	Fremont		136,117.79	139,127.80	142,130.93	132,390.11	111,116.38	109,675.92	109,932.55
3	Omaha		566,890.03	586,298.07	607,131.78	570,898.18	488,407.33	495,231.27	511,382.64
4	Auburn		77,934.77	79,009.61	79,259.95	74,305.45	62,881.00	62,566.60	63,348.68
5	Beatrice		75,000.00	76,875.00	78,796.88	74,305.45	62,881.00	62,566.60	63,348.68
6	Milford		128,833.87	131,908.35	134,993.15	123,906.45	105,332.09	103,856.74	104,190.94
7	Columbus		131,533.43	134,230.34	136,006.86	126,489.71	106,239.75	104,797.96	105,281.44
8	Neligh		129,619.19	131,543.32	132,631.32	124,160.86	103,574.52	100,730.26	98,052.79
9	Hastings		103,232.16	104,896.22	106,013.55	99,081.73	83,193.35	81,897.73	81,117.11
10	Kearney		274,924.57	281,052.98	291,031.53	271,641.42	231,068.23	229,971.68	229,399.36
11	Holdrege		75,000.00	76,875.00	78,796.88	74,305.45	62,881.00	62,566.60	63,348.68
13	Scottsbluff		117,236.23	118,530.05	117,860.91	127,871.26	105,183.73	101,802.92	164,369.52
14	Sidney		75,000.00	76,875.00	78,796.88	74,305.45	62,881.00	62,566.60	0.00
15	Trenton		75,000.00	76,875.00	78,796.88	74,305.45	62,881.00	62,566.60	63,348.68
16	Ogallala		95,491.87	96,569.01	96,445.59	88,463.96	73,287.69	73,978.74	74,901.71
17	Ainsworth		75,000.00	76,875.00	78,796.88	74,305.45	62,881.00	62,566.60	63,348.68
18	Lincoln		302,901.90	311,958.75	324,389.95	306,329.49	260,938.61	260,598.07	263,890.33
19	Omaha		436,967.26	451,338.87	465,849.68	440,805.69	373,315.61	370,384.94	378,226.85
<b>Total</b>		<b>0.00</b>	<b>3,000,000.00</b>	<b>3,075,000.00</b>	<b>3,151,875.00</b>	<b>2,972,218.00</b>	<b>2,515,240.00</b>	<b>2,502,664.00</b>	<b>2,533,947.00</b>

**ESU's  
Property Taxes Levied**

ESU	City	Property Taxes Levied FY99	Property Taxes Levied FY00	Property Taxes Levied FY01	Property Taxes Levied FY02	Property Taxes Levied FY03	Property Taxes Levied FY04	Property Taxes Levied FY05	Tax Per Student FY99	Tax Per Student FY00	Tax Per Student FY01	Tax Per Student FY02	Tax Per Student FY03	Tax Per Student FY04	Tax Per Student FY05
1	Wakefield	455,188.63	491,737.01	521,555.53	542,270.04	559,140.83	588,011.56	618,624.58	37.90	42.11	46.16	48.99	50.73	54.20	56.37
2	Fremont	617,566.24	606,748.12	605,965.66	662,625.62	723,982.42	770,145.19	805,666.23	46.39	46.13	46.54	51.32	56.48	60.53	63.91
3	Omaha	1,734,254.48	2,809,647.58	2,971,172.86	3,162,222.87	3,328,890.22	3,515,702.83	3,664,030.64	30.32	49.07	51.66	54.78	56.86	58.76	59.87
4	Auburn	292,512.13	321,573.88	342,886.68	364,599.46	377,863.22	387,224.49	400,790.74	39.60	44.51	48.96	53.05	56.30	58.68	61.76
5	Beatrice	305,115.50	315,111.72	323,844.55	339,135.14	331,761.08	353,117.17	377,390.40	47.13	50.25	52.26	56.42	56.19	60.67	65.33
6	Millford	753,951.98	805,828.40	825,531.15	875,750.26	903,196.49	962,974.40	988,378.64	59.98	64.77	66.92	72.71	74.54	80.17	82.98
7	Columbus	686,299.90	738,156.65	784,282.23	818,945.48	816,609.40	841,027.39	883,273.92	53.43	58.26	51.66	66.53	66.79	69.35	73.34
8	Neligh	560,484.34	619,791.23	625,586.73	617,079.38	648,455.91	680,425.03	718,944.01	44.30	49.96	51.66	51.12	54.47	58.51	64.38
9	Hastings	472,150.68	508,572.73	537,565.51	556,031.16	562,381.87	575,934.18	592,706.54	47.39	52.01	56.21	58.48	59.61	61.74	65.00
10	Kearney	1,016,301.73	1,078,873.65	1,139,574.78	1,199,006.35	1,256,558.20	1,308,462.81	1,384,807.29	37.02	39.74	41.79	44.17	45.94	47.72	51.16
11	Holdrege	382,665.67	419,931.47	433,016.15	446,470.46	461,284.59	476,182.65	489,669.50	60.90	69.02	72.89	77.73	82.25	86.11	91.66
12	Scottsbluff	376,695.46	454,750.62	470,867.61	506,786.88	575,552.30	594,514.89	622,218.47	33.07	40.89	44.02	40.71	47.57	50.55	53.57
13	Sidney	212,886.23	221,043.15	231,296.50	217,497.82	228,958.97	213,000.99	224,622.72	57.65	61.95	65.50	64.06	70.70	70.87	77.31
14	Trenton	245,431.74	212,486.31	245,791.92	254,002.78	268,680.92	290,472.29	296,106.34	52.76	46.87	52.13	60.42	65.66	72.17	76.12
15	Ogallala	471,951.25	488,732.43	537,289.40	517,718.30	518,487.16	580,912.95	579,887.61	51.44	54.57	62.13	61.47	62.97	69.48	69.32
16	Ainsworth	140,027.49	139,909.44	140,029.41	139,923.65	166,118.67	173,828.91	179,178.46	64.69	65.41	68.60	68.70	82.30	90.58	94.76
17	Lincoln	1,300,816.53	1,400,373.81	1,464,731.82	1,643,855.00	1,705,837.47	1,948,615.29	2,008,515.06	42.93	46.37	48.09	53.57	55.07	62.53	64.29
18	Lincoln	1,500,816.94	1,677,386.55	1,491,888.19	2,011,302.77	2,087,675.18	2,191,681.31	2,242,149.54	34.14	38.17	33.91	45.27	46.82	49.17	49.73
19	Omaha	11,525,116.92	13,310,654.75	13,692,876.68	14,875,223.42	15,521,434.90	16,452,234.33	17,076,960.69	40.66	47.44	49.19	53.31	55.65	59.04	61.28
Total															

ESU	Membership	Property Taxes Levied FY99	Property Taxes Levied FY00	Property Taxes Levied FY01	Property Taxes Levied FY02	Property Taxes Levied FY03	Property Taxes Levied FY04	Property Taxes Levied FY05	% Change FY00	% Change FY01	% Change FY02	% Change FY03	% Change FY04	% Change FY05
1	Wakefield	12,009.00	11,678.00	11,298.00	11,068.00	11,022.00	10,849.00	10,975.00	-2.76%	-3.25%	-2.04%	-0.42%	-1.57%	1.16%
2	Fremont	13,313.00	13,154.00	13,019.00	12,912.00	12,818.00	12,723.00	12,606.00	-1.19%	-1.03%	-0.82%	-0.73%	-0.74%	-0.92%
3	Omaha	57,195.00	57,255.00	57,514.00	57,726.00	58,542.00	59,831.00	61,200.00	0.10%	0.45%	0.37%	1.41%	2.20%	2.29%
4	Auburn	7,386.00	7,225.00	7,003.00	6,873.00	6,712.00	6,599.00	6,490.00	-2.18%	-3.07%	-1.86%	-2.34%	-1.68%	-1.65%
5	Beatrice	6,474.00	6,271.00	6,197.00	6,011.00	5,904.00	5,820.00	5,777.00	-3.14%	-1.18%	-3.00%	-1.78%	-1.42%	-0.74%
6	Millford	12,571.00	12,442.00	12,336.00	12,045.00	12,117.00	12,012.00	11,911.00	-1.03%	-0.85%	-2.36%	0.60%	-0.87%	-0.84%
7	Columbus	12,846.00	12,671.00	12,433.00	12,309.00	12,227.00	12,127.00	12,043.00	-1.36%	-1.88%	-1.00%	-0.67%	-0.82%	-0.69%
8	Neligh	12,651.00	12,406.00	12,110.00	12,071.00	11,904.00	11,630.00	11,168.00	-1.94%	-2.39%	-0.32%	-1.38%	-2.30%	-3.97%
9	Hastings	9,963.00	9,778.00	9,563.00	9,508.00	9,434.00	9,329.00	9,118.00	-1.86%	-2.20%	-0.58%	-0.78%	-1.11%	-2.26%
10	Kearney	27,453.00	27,151.00	27,267.00	27,143.00	27,355.00	27,421.00	27,067.00	-1.10%	0.43%	-0.45%	0.78%	0.24%	-1.29%
11	Holdrege	6,284.00	6,084.00	5,941.00	5,744.00	5,608.00	5,530.00	5,342.00	-3.18%	-2.35%	-3.32%	-2.37%	-1.39%	-3.40%
12	Scottsbluff	11,389.57	11,122.60	10,696.65	12,450.19	12,099.02	11,761.06	11,615.20	-2.34%	-3.83%	16.39%	-2.82%	-2.79%	-1.24%
13	Sidney	3,692.89	3,568.13	3,531.36	3,395.39	3,238.54	3,005.72	2,905.33	-3.38%	-1.03%	-3.85%	-4.62%	-7.19%	-3.34%
14	Trenton	4,652.00	4,534.00	4,296.00	4,204.00	4,092.00	4,025.00	3,890.00	-2.54%	-5.25%	-2.14%	-2.66%	-1.64%	-3.35%
15	Ogallala	9,174.51	8,956.75	8,647.46	8,422.90	8,233.53	8,361.44	8,365.65	-2.37%	-3.45%	-2.60%	-2.25%	-1.55%	0.05%
16	Ainsworth	2,164.62	2,138.91	2,041.26	2,036.71	2,018.41	1,919.16	1,890.84	-1.19%	-4.57%	-0.22%	-0.90%	-4.92%	-1.48%
17	Lincoln	30,303.00	30,199.00	30,459.00	30,688.00	30,975.00	31,163.00	31,242.00	-0.34%	0.86%	0.75%	0.94%	0.61%	0.25%
18	Lincoln	43,960.00	43,945.00	43,995.00	44,431.00	44,594.00	44,577.00	45,082.00	-0.03%	0.11%	0.99%	0.37%	-0.04%	1.13%
19	Omaha	283,481.59	280,579.39	278,347.73	279,038.19	278,893.50	278,683.38	278,688.02	-1.02%	-0.80%	0.25%	-0.05%	-0.08%	0.00%
Total														

**State Aid to ESU's  
Core Services & Technology Infrastructure**

ESU	City	State Aid FY99	State Aid FY00	State Aid FY01	State Aid FY02	State Aid FY03	State Aid FY04	State Aid FY05	State Aid FY06	Aid Per Student FY99	Aid Per Student FY00	Aid Per Student FY01	Aid Per Student FY02	Aid Per Student FY03	Aid Per Student FY04	Aid Per Student FY05
1	Wakefield	396,535.12	522,041.68	515,825.95	515,758.54	475,049.07	406,513.41	398,245.45	407,195.79	33.02	44.70	45.66	46.60	43.10	37.47	36.29
2	Fremont	441,098.09	576,231.97	578,002.50	590,478.93	550,010.98	469,074.15	462,993.25	464,076.66	33.13	43.81	44.40	45.73	42.91	36.87	36.73
3	Omaha	1,818,723.24	2,399,834.43	2,435,758.69	2,522,311.68	2,371,780.39	2,061,795.45	2,090,602.37	2,158,785.10	31.80	41.91	42.35	43.69	40.51	34.46	34.16
4	Auburn	253,231.48	329,923.87	328,243.17	329,283.18	308,699.90	265,450.08	264,122.83	267,424.36	34.29	45.66	46.87	47.91	45.99	40.23	40.70
5	Beatrice	242,500.00	317,500.00	319,375.00	327,359.38	308,699.90	265,450.08	264,122.83	267,424.36	37.46	50.63	51.54	54.46	52.29	45.61	45.72
6	Millford	421,236.09	545,396.70	548,009.48	560,825.23	514,765.87	444,655.96	436,427.78	439,838.64	33.51	43.84	44.42	46.56	42.48	37.02	36.81
7	Columbus	431,135.46	556,824.86	557,656.11	565,036.66	525,497.94	448,487.63	442,401.10	444,442.12	33.56	43.94	44.85	45.90	42.98	36.98	36.74
8	Neligh	427,466.69	548,721.25	546,492.98	551,013.03	515,822.81	437,236.44	425,229.46	419,926.63	33.79	44.23	45.13	45.65	43.33	37.60	38.08
9	Hastings	335,592.64	437,016.15	435,788.37	440,430.30	411,632.27	351,198.01	345,728.55	342,433.19	33.68	44.69	45.57	46.32	43.63	37.65	37.92
10	Keamey	891,597.77	1,163,847.36	1,167,626.62	1,209,082.21	1,128,526.63	975,446.94	970,817.80	968,401.86	32.48	42.87	42.82	44.54	41.25	35.57	35.87
11	Holdrege	242,500.00	317,500.00	319,375.00	327,359.38	308,699.90	265,450.08	264,122.83	267,424.36	33.89	52.19	53.76	56.99	55.05	48.00	49.44
12	Scottsbluff	384,994.29	496,300.06	492,429.71	489,649.82	531,237.56	444,029.66	429,757.66	693,880.49	33.80	44.62	46.04	39.33	43.91	37.75	37.00
13	Trenton	242,500.00	317,500.00	319,375.00	327,359.38	308,699.90	265,450.08	264,122.83	267,424.36	65.67	88.98	90.44	96.41	95.32	88.31	90.91
14	Sidney	310,944.17	404,248.91	401,193.20	400,680.45	367,521.02	309,381.58	312,298.79	316,195.09	52.13	70.03	74.34	77.87	75.44	65.95	67.90
15	Ogallala	242,500.00	317,500.00	319,375.00	327,359.38	308,699.90	265,450.08	264,122.83	267,424.36	112.03	148.44	156.46	160.73	152.94	138.32	139.69
16	Ainsworth	970,793.34	1,282,284.69	1,296,023.74	1,347,668.80	1,272,637.24	1,101,543.76	1,100,106.10	1,114,004.36	32.04	42.46	42.55	43.92	41.09	35.35	35.21
17	Lincoln	1,404,151.62	1,849,828.07	1,875,074.48	1,935,359.27	1,831,314.82	1,575,939.53	1,563,567.71	1,596,672.28	31.94	42.09	42.62	43.56	41.07	35.35	34.68
18	Omaha	9,700,000.00	12,700,000.00	12,775,000.00	13,094,375.00	12,347,996.00	10,618,003.00	10,564,913.00	10,696,974.00	34.22	45.26	45.90	46.93	44.27	38.10	37.91

ESU	Membership FY98	Membership FY00	Membership FY01	Membership FY02	Membership FY03	Membership FY04	Membership FY05	Membership FY06	% Change FY00	% Change FY01	% Change FY02	% Change FY03	% Change FY04	% Change FY05
1	11,995.00	11,678.00	11,298.00	11,068.00	11,022.00	10,849.00	10,975.00	10,849.00	-2.76%	-3.25%	-2.04%	-0.42%	-1.57%	1.16%
2	13,404.00	13,154.00	13,019.00	12,912.00	12,818.00	12,723.00	12,606.00	12,606.00	-1.19%	-1.03%	-0.82%	-0.73%	-0.74%	-0.92%
3	56,962.00	57,255.00	57,514.00	57,726.00	58,542.00	59,831.00	61,200.00	61,200.00	0.10%	0.45%	0.37%	1.41%	2.20%	2.29%
4	7,464.00	7,225.00	7,003.00	6,873.00	6,712.00	6,599.00	6,490.00	6,490.00	-2.18%	-3.07%	-1.86%	-2.34%	-1.68%	-1.65%
5	6,572.00	6,271.00	6,197.00	6,011.00	5,904.00	5,820.00	5,777.00	5,777.00	-3.14%	-1.18%	-3.00%	-1.78%	-1.42%	-0.74%
6	12,776.00	12,442.00	12,336.00	12,045.00	12,117.00	12,012.00	11,911.00	11,911.00	-1.03%	-0.85%	-2.36%	0.60%	-0.87%	-0.84%
7	13,089.00	12,671.00	12,433.00	12,309.00	12,227.00	12,127.00	12,043.00	12,043.00	-1.36%	-1.88%	-1.00%	-0.67%	-0.82%	-0.69%
8	12,973.00	12,406.00	12,110.00	12,071.00	11,904.00	11,630.00	11,168.00	11,168.00	-1.94%	-2.39%	-0.32%	-1.38%	-2.30%	-3.97%
9	10,068.11	9,778.00	9,563.00	9,508.00	9,434.00	9,329.00	9,118.00	9,118.00	-1.86%	-2.20%	-0.58%	-0.78%	-1.11%	-2.26%
10	27,647.98	27,453.00	27,267.00	27,143.00	27,355.00	27,421.00	27,067.00	27,067.00	-1.10%	0.43%	-0.45%	0.78%	0.24%	-1.29%
11	6,325.89	6,284.00	5,941.00	5,744.00	5,608.00	5,530.00	5,342.00	5,342.00	-3.18%	-2.35%	-3.32%	-2.37%	-1.39%	-3.40%
12	11,630.10	11,389.57	11,122.60	10,696.65	12,099.02	11,761.06	11,615.20	11,615.20	-2.34%	-3.83%	16.39%	-2.82%	-2.79%	-1.24%
13	3,806.08	3,682.89	3,531.36	3,395.39	3,238.54	3,005.72	2,905.33	2,905.33	-3.38%	-1.03%	-3.85%	-4.62%	-7.19%	-3.34%
14	4,716.00	4,534.00	4,296.00	4,204.00	4,092.00	4,025.00	3,890.00	3,890.00	-5.25%	-2.14%	-2.14%	-2.66%	-1.64%	-3.05%
15	9,288.77	9,174.51	8,956.75	8,422.90	8,233.53	8,361.44	8,365.65	8,365.65	-2.37%	-4.57%	-0.22%	-2.25%	-1.64%	-0.05%
16	2,263.67	2,164.62	2,138.91	2,036.71	2,018.41	1,919.16	1,890.84	1,890.84	-1.19%	-4.57%	-0.22%	-0.90%	-4.92%	-1.48%
17	30,152.00	30,199.00	30,459.00	30,688.00	30,975.00	31,163.00	31,242.00	31,242.00	-0.34%	0.86%	0.75%	0.94%	0.61%	0.25%
18	43,854.00	43,945.00	43,995.00	44,431.00	44,594.00	44,577.00	45,082.00	45,082.00	-0.03%	0.11%	0.99%	0.37%	-0.04%	1.13%
19	284,987.60	280,579.39	278,347.73	279,038.19	278,893.50	278,683.38	278,688.02	278,688.02	-1.02%	-0.80%	0.25%	-0.05%	-0.08%	0.00%

Note: The computation of the state aid amount for each fiscal year is actually based on fall membership of the prior year. This chart shows state aid per student based on actual fall membership in the year shown.

**Educational Service Units  
State Aid Received and Property Taxes Levied Per Student**

<u>ESU</u>	<u>City</u>	<u>Aid &amp; Tax Per Student FY99</u>	<u>Aid &amp; Tax Per Student FY00</u>	<u>Aid &amp; Tax Per Student FY01</u>	<u>Aid &amp; Tax Per Student FY02</u>	<u>Aid &amp; Tax Per Student FY03</u>	<u>Aid &amp; Tax Per Student FY04</u>	<u>Aid &amp; Tax Per Student FY05</u>
1	Wakefield	70.92	86.81	91.82	95.59	93.83	91.67	92.66
2	Fremont	79.52	89.94	90.94	97.05	99.39	97.40	100.64
3	Omaha	62.12	90.98	94.01	98.47	97.37	93.22	94.03
4	Auburn	73.89	90.17	95.83	100.96	102.29	98.91	102.46
5	Beatrice	84.59	100.88	103.80	110.88	108.48	106.28	111.05
6	Milford	93.49	108.61	111.34	119.27	117.02	117.19	119.79
7	Columbus	86.99	102.20	107.93	112.43	109.77	106.33	110.08
8	Neligh	78.09	94.19	96.79	96.77	97.80	96.11	102.46
9	Hastings	81.07	96.70	101.78	104.80	103.24	99.39	102.92
10	Kearney	69.50	82.61	84.61	88.71	87.19	83.29	87.03
11	Holdrege	99.49	121.21	126.65	134.72	137.30	134.11	141.10
13	Scottsbluff	66.87	85.51	90.06	80.04	91.48	88.30	90.57
14	Sidney	123.32	150.93	155.94	160.47	166.02	159.18	168.22
15	Trenton	104.89	116.90	131.55	138.29	141.10	138.12	144.02
16	Ogallala	85.33	99.70	108.52	109.04	107.61	106.48	106.65
17	Ainsworth	176.72	213.85	225.06	229.43	235.24	228.90	234.45
18	Lincoln	74.97	88.83	90.64	97.49	96.16	97.88	99.50
19	Omaha	<u>66.08</u>	<u>80.26</u>	<u>76.53</u>	<u>88.83</u>	<u>87.89</u>	<u>84.52</u>	<u>84.41</u>
<b>Total</b>		74.88	92.70	95.09	100.24	99.92	97.14	99.19

<u>\$ Range</u>	<u>62-177</u>	<u>80-214</u>	<u>77-225</u>	<u>80-229</u>	<u>87-235</u>	<u>83-229</u>	<u>84-234</u>
<b># of ESU's</b>							
\$60-80	9	0	1	0	0	0	0
\$80-100	6	11	8	8	8	10	6
\$100-120	1	4	5	6	6	4	8
\$120-140	1	1	2	2	1	2	0
\$140-160	1	1	1	0	1	1	2
\$160+	0	1	1	2	2	1	2

**Appendix K: Instructional Technology Offerings in Teacher  
Education Programs**



# **Instructional Technology Offerings in Teacher Education Programs**

## ***Training Future Teachers***

Every teacher education institution in Nebraska must have a plan which identifies the courses and course completion requirements which the institution uses to assure that all candidates have the knowledge and skill to utilize the latest communication technologies. These technologies include “instructional television, instructional computing, film, videodisc, and other telecommunications technologies.” (NAC 92, Chapter 20, Section 006.02)

Institutions can meet this requirement in a variety of ways:

- a required education class in instructional technology (see attached lists),
- a required general studies class in technology, computer applications, etc., or
- required classes in education that integrate the use of technology within the curricula.

The material covered in the courses varies by institution, as the attached list indicates. Most courses focus on using technology to enhance the delivery of content in the classroom, rather than using the technology to deliver the content at a distance.

The technology requirement is one of many that teacher training programs must meet. Students majoring in education often have a larger number of required courses than students in other programs. This can leave the student with fewer opportunities to select elective courses. Nonetheless, a few institutions do offer undergraduate courses that focus on instructional technology other than those in the attached list.

## ***Training Today's Teachers***

Today's teachers may or may not have had technology training when they were in college. For those who did take a technology course, their training is likely to become rapidly out-dated. Graduate courses, as part of a master's degree or purely for personal improvement, are available from several institutions. Most institutions offer graduate courses in instructional technology, although few of these focus on using the technology for distance delivery of classes. Attached is a list of about a dozen courses that specifically indicated some aspect of distance delivery in the catalog course description.

## Instructional Technology Courses Required for Teacher Education Majors Nebraska Public Institutions

Institution	Technology Requirement	Description / Technologies	Comment
UNL	TEAC 259-Instructional Technology (3 credit hours)	Use of electronic portfolios, Internet resources, applications software, and authoring programs to support instruction	Required for all education majors except business
UNO	EDUC 2520-Instructional Systems (3 credit hours)	Instructional technology, delivery systems, microcomputers, VCRs	Required for all education majors
UNK	TE 206-Instructional Technology and the Preservice Teacher (3 credit hours)	Introduce preservice teachers to a variety of technologies and strategies, and ethical and democratic principles of technology integration	Required for all education majors
CSC	EDUC 224-Multimedia Support of Instruction/Learning (2 credit hours)	Operation of various teaching machines; creation of audio-visual materials; use of computers and databases to facilitate instruction	Required for all education majors
PSC	Technology standards are embedded in curriculum		Students must also meet college technology requirement
WSC	Technology Performance Assessment	Skills expected: word processing, spreadsheet, presentation software, Web design and Web use	Required for all education majors

## Instructional Technology Courses Required for Teacher Education Majors Nebraska Independent Institutions

<b>Institution</b>	<b>Technology Requirement</b>	<b>Description / Technologies</b>	<b>Comment</b>
College of St. Mary	EDU 201-Technology and Instructional Material (3 credit hours)	Use of instructional media, Internet, Web page construction, software, video equipment, digital cameras, scanners	Required for all education majors
Concordia	EDUC 345 – Media for the Classroom (2 credit hours)	Computers, video disc, CD ROM, digitized images and sound	Required for all education majors
Creighton	EDU 242 - Computer Related Technologies in Teacher Education (1 credit hour)	Give students a working knowledge of technologies currently being used in elementary schools	Required for all elementary education majors
	EDU 342 – Technology Laboratory in Secondary Education (1 credit hour)	Development of skills in computer-related technology for teaching and learning in secondary schools	Required for all secondary education majors
Dana	none identified		Technology standards likely are embedded in curriculum
Doane	IST 201 – Instructional Technology (3 credit hours)	Teaching about technology, with technology, and integrating technology in the classroom	Required for all education majors
Grace	ED 316 - Instructional Technology (3 credit hours)	Special emphasis on instructional software, computer learning centers, Web design, and Internet resources	Required for all education majors
Hastings	ED 352 – Instructional Tools (3 credit hours)	Computers, interactive video, distance learning, and more traditional tools	Required for all education majors
Midland Lutheran	CSC 101-106 – Computer Science OR EDU 204 Technology Pre-K-12 (3 credit hours)	Describes current issues and trends	CSC or EDU required for all education majors
	EDU 390 – General Methods-Secondary (3 credit hours)	Assessment tools, lesson plans, instructional methods, classroom management, educational technologies, ethics	Required for all secondary education majors
	EDU 398 – General Methods-	Assessment tools, lesson plans, instructional	Required for all

<b>Institution</b>	<b>Technology Requirement</b>	<b>Description / Technologies</b>	<b>Comment</b>
	Elementary (3 credit hours)	methods, classroom management, educational technologies, ethics	elementary education majors
Nebraska Wesleyan	Educ 187 - Instructional Technology (3 credit hours)	Computers, databases, wireless telecommunication, software	Required for all education majors
Union	CPTR 220 – Microcomputer Applications	Word processing, spreadsheets, software, databases, Internet	General education requirement for all education majors
York	EDU 373 - Instructional Technologies (3 credit hours)	Evaluate, use, and make instructional technologies; instructional television, computers, and video discs	Required for all education majors

### **Courses Addressing Some Aspect of Distance Delivery**

All are graduate courses, unless designated with an asterisk.

<b>Institution</b>	<b>Course</b>	<b>Credit Hours</b>	<b>Description</b>
UNL	480*/880 – Teaching with Technology	1-3	Survey and analysis of the application of technology to improve teaching; various topics, including Web teaching
UNO	EDUC 4780*/8786 – Instructional TV Program Planning and Production	3	Production, training, and practice TV lessons
UNO	EDUC 8030 – Seminar in Education: Special Topics	1-3	Variable content course focusing on selected topics; may deal with instructional delivery
UNO	EDUC 8540 – Using Microcomputers in the Educational Process	3	Hands-on experience with a broad range of instructional computing applications, including computer-mediated telecommunications
UNO	EDUC 8600 – Advanced Seminar in Educational Technology	1-3	Variable content course focusing on selected advanced topics in educational technology; topics will include distance education
UNK	TE 877 – Developing Computer-Mediated Educational Environments	3	Design, implement, and evaluate learning-based computer-mediated instructional environments

Institution	Course	Credit Hours	Description
UNK	TE 881 – Distance Education	3	A variety of distance education technologies including telecommunications, satellites, audiographics, fiber optics, and other distance education media
UNK	TE 884 – Educational Telecommunications	3	Use of electronic online resources and other types of telecommunication in education such as electronic conferencing
CSC	EDUC 535 – Computer Assisted Instruction	3	Developing K-12 online course materials and teaching methodologies
WSC	EDU 682 – Developing and Integrating Computer Applications in the Classroom	3	Will touch on distance learning as well as various electronic communication technologies
WSC	EDU 760 – Information Management	3	Understand and use educationally related technology, including telecommunications and distance-learning channels

**Appendix L: Glossary of Telecommunications Terms**

# Glossary of Telecommunications Terms

## **Asynchronous**

Occurring at different times; events separated by time, as in asynchronous distance learning

## **Audioconferencing**

Voice-only communications linking two or more sites. In most cases, standard telephone lines and speakerphones are used.

## **Backbone**

A high-speed line or series of connections that forms a major pathway within a network. The term is relative as a backbone in a small network will likely be much smaller than many non-backbone lines in a large network. See Also: Network.

## **Bandwidth**

The rate at which information can be transmitted across a medium. The rates are measured in bits (b/s), kilobits (Kb/s), megabits (Mb/s) or gigabits per second (Gb/s). Typical transmission services are 56Kb/s, 64Kb/s, 1.544Mb/s (T1) 45Mb/s (T3), and 100Mb/s.

## **Broadband**

A method of transmitting larger amounts of data, voice and video.

## **Broadcast**

Transmission of data to everybody on the network or network segment.

## **CAP**

Collaborative Aggregation Partnership. The Nebraska partnership of the DAS Division of Communications, University of Nebraska, and Nebraska Educational Telecommunications that operate Network Nebraska, the statewide network.

## **Codec**

COder-DECoder. A video codec converts the analog video signals from a video source to digital signals for transmission over digital circuits, then converts the digital signals back to analog signals for display. An audio codec converts the audio signals to digital signals for transmission over digital circuits, then converts the digital signal back to analog for reproduction.

## **Common Carrier**

Usually a telecommunications company that owns a transmission medium and rents, leases or sells portions for a set tariff to the general public via shared circuits through published and nondiscriminatory rates. (MCI, etc.)

## **Compression**

The method of taking raw data and processing it so that it may be represented with less information (or bits in the digital world.)

## **Compressed Video**

Processed video images; transmits changes from one frame to the next which reduces the bandwidth to send them over a telecommunications channel which reduces cost. Also called bandwidth compression or bit rate reduction.

## **Desktop Videoconferencing**

Videoconferencing on a personal computer - Most appropriate for small groups or individuals. Many desktop videoconferencing systems support document sharing.

**Digital**

Discrete bits of information in numerical steps. A form of information that is represented by signals encoded as a series of discrete numbers, intervals or steps, as contrasted to continuous or analog circuits.

**Digital Media**

Refers to any type of information in digital format including computer-generated text, graphics and animations, as well as photographs, animation, sound and video.

**Distance Learning**

Technology used as the primary mode of instructional delivery.

**DOC**

Nebraska state government Division of Communications, within the Department of Administrative Services

**Encryption**

A procedure for encoding data that makes it difficult to decode data without proprietary software or hardware. This procedure protects data or software from unauthorized access or use.

**Enterprise network**

The aggregate of all LANs and WANs comprising a given networking environment

**ESU**

Educational Service Unit. Nebraska's version of an intermediate education service agency; comprised of 18 different geographic regions.

**ESU-NOC**

Educational Service Unit Network Operations Committee. Comprised of 18 WAN managers from the respective Nebraska ESUs.

**ESU-TAG**

Educational Service Unit Technology Affiliate Group. Comprised of ~40 instructional technology specialists from the various Nebraska ESUs.

**Fiber Optics**

A communications medium utilizing laser or "light" transmission. Uses a glass or plastic fiber carrying light to transmit voice, data and video signals. Each fiber can carry from 90 to 150Mbps.

**Full-motion Video**

Not compressed. A standard video signal of 30 frames per second (fps), 525 horizontal lines per frame, capable of complete action.

**Intellectual Property**

Creative content that can be protected by either copyright or patent law. With the proliferation of digital transmission of content without monitoring, intellectual property rights, protection, and compensation have become hotly debated topics in the multimedia arena.

**IP**

Internet Protocol. Packet-based protocol for delivering data across networks.

**IP Network**

A network that uses the TCP/IP protocol.



**JPEG**

Joint Photographic Experts Group. JPEG is an industry standard for still image compression that has moved into full motion video. JPEG is a compression technique based upon intraframe encoding technology. It allows for the full restoration of symmetrically compressed images.

**LAN**

Local Area Network. A private transmission network interconnecting offices within a building or a group of buildings used to convey voice, data and video traffic.

**LEC**

Local Exchange Carrier. Carriers that can carry only intra-LATA traffic. Local telephone companies such as Cincinnati Bell, Ohio Bell, Illinois Bell, Pacific Bell in California, etc.

**Local Loop**

Referred to as the "last mile" between the LEC and the customer premise.

**MAN**

Municipal Area Network. A private transmission network interconnecting buildings or groups of buildings over an area the size of a community; used to convey voice, data and video traffic.

**'Meg'**

Slang for Megabits per second.

**Mbps**

Megabits per second. A unit of measure of data of 1,000,000 bits per second.

**Multimedia**

Refers to the delivery of information, usually via personal computer, that combines different content formats (text, graphics, audio, still images, animation, motion video, etc.) and/or storage media (magnetic disk, optical disc, video/audio tape, RAM).

**Multipoint Videoconferencing**

Videoconference with more than two sites. The sites must connect via a video bridge.

**NEB\*SAT**

The Nebraska Satellite system – A general term used to describe all the satellite-based services delivered by the Nebraska Educational Telecommunications Commission (NETC).

**NET**

Nebraska Educational Telecommunications – A term that describes the staff organization of the NETC.

**Network**

A group of stations (including transmission devices, servers, cables, routers and satellites computers, telephones, or other devices) connected by communications facilities for exchanging information. Connection can be permanent, via cable, or temporary, through telephone or other communication links. The transmission medium can be physical (fiber optic cable) or wireless (satellite or RF).

**Network2**

One-way (broadcast quality) distance learning channels on NEB\*SAT.

**Network3**

Low bandwidth, interactive teleconference network on NEB\*SAT.

**Network Nebraska**

Term used to describe the statewide multipurpose telecommunications backbone and all of its associated service offerings and support.

**NITC**

Nebraska Information Technology Commission. Formed in 1998 by Nebraska Legislature LB 924. Currently codified in NRS 86-501 to 86-516.

**NOC**

Network Operations Center. A group which takes care of the day-to-day operations of a network.

**NVCN**

The Nebraska Video Conferencing Network – A network of the DOC and operated by NET. It is a low bandwidth, terrestrially delivered, teleconference network.

**PSC**

Public Service Commission. The Nebraska state commission that regulates intrastate telecommunications.

**Public Network**

A network operated by the carriers (IXC and LEC) which includes network-based services and network-based switching.

**QOS**

Quality of Service - The ability to define a level of performance in a data communications system. For example, the ATM networks specify modes of service that ensure optimum performance for traffic such as real-time voice and video.

**Router**

A device or setup that finds the best route between any two networks, even if there are several networks to traverse. Like bridges, remote sites can be connected using routers over dedicated or switched lines to create WANs.

**Service Provider**

A telecommunications provider that owns circuit switching equipment.

**Telephony**

The word used to describe the science of transmitting voice over a telecommunications network.

**Videoconferencing**

The use of digital video transmission systems to communicate between sites using video and voice. Digital video transmission systems typically consist of camera, codec, network access equipment, video and audio system.

**VOIP**

Voice over IP -See IP telephony.

**WAN**

Wide Area Network. A data network typically extending a LAN outside a building or beyond a campus, over IXC or LEC lines to link other LAN's at remote sites. Typically created by using bridges or routers to connect geographically separated LANs.



