DOCUMENT RESUME

ED 416 818 IR 018 709

AUTHOR Maushak, Nancy J.; Manternach, Lynn
TITLE Iowa Distance Education Alliance. Evaluation Report, July, 1996 - September, 1997.
INSTITUTION Iowa State Univ. of Science and Technology, Ames. Coll. of Education.
SPONS AGENCY Department of Education, Washington, DC. Office of Education Technology.
PUB DATE 1997-00-00
NOTE 376p.; Prepared by the Technology Research and Evaluation Group.
CONTRACT R203-F5000-96
PUB TYPE Reports - Evaluative (142)
EDRS PRICE MF01/PC16 Plus Postage.
DESCRIPTORS *Curriculum Development; *Distance Education; Educational Objectives; *Educational Technology; Elementary Secondary Education; Federal Programs; Grants; Higher Education; *Instructional Materials; *Interactive Television; Material Development; Multimedia Materials; Partnerships in Education; Pilot Projects; State Programs; Teacher Education; Telecommunications
IDENTIFIERS Fiber Optics; *Iowa; Star Schools; *Technology Integration

ABSTRACT

This report summarizes evaluation of data collected during 1996-97 for a project of the Iowa Distance Education Alliance, a partnership of Iowa educational institutions including the Iowa Department of Education, Iowa Public Television, the state's three regent institutions, Iowa's 15 community colleges, the 15 Area Education Agencies, and Local Education Agencies. The alliance worked together to implement a special statewide Star Schools grant to demonstrate the use of fiber-optic technology to provide live, two-way, full-motion interactive instruction which allows greater levels of interactivity than previous forms of distance instruction. The grant allowed the state to equip over 100 fully interactive video classrooms in community colleges, universities, and K-12 schools. The six goal areas were: (1) developing instructional materials to be used in distance education; (2) supporting training and access to distance education resources; (3) providing training and technical support for distance education; (4) expanding access to and information about distance education; (5) supporting incorporation of distance education in colleges and universities involved in training future teachers; and (6) piloting new technology and telecommunications integration in selected schools. The report is organized by these goals and employs the AEIOU components: Accountability, Effectiveness, Impact, Organizational context, Unanticipated outcomes. The report is largely comprised of charts, graphs, and quantitative data. Data are also summarized by national Star Schools goals and objectives, and conclusions related to the project are discussed. Supporting material in the form of appendices are located at the end of each chapter evaluating the goals of the Alliance which include: (1) Instructional Materials; (2) Infrastructure Development; (3) Training and Technical Support; (4) Information Systems; (5) Teacher Education Alliance; and (6) Integration of Technology and Telecommunications. (JAK)

Iowa Distance Education Alliance

Evaluation Report

July, 1996 - September, 1997

Prepared by
Nancy J. Maushak, Ph. D.
Lynn Manternach
Technology Research and Evaluation Group
College of Education
Iowa State University
E006 Lagomarcino, Ames, IA 50011
515/294-9464 FAX 515/294-9284

Support for this report was provided in part by U.S. Department of Education Star Schools grant #R203 F5000-96

Table of Contents

Introduction and Background....1

Goal 1: Instructional Materials....4
Appendix: Multimedia Curriculum Projects....9
Appendix: Mississippi River Project....22
Appendix: Exemplary Technology Projects....24

Goal 2: Infrastructure Development....58
Appendix: Regional Partnerships....62
Appendix: ICN and Internet Connections....100

Goal 3: Training and Technical Support....130
Appendix: Training and Technical Support....133

Goal 4: Information Systems....139
Appendix: Information Systems....143

Goal 5: Teacher Education Alliance....164
Appendix: Technology Training....168
Appendix: Publications....183
Appendix: Research....208

Goal 6: Integration of Technology and Telecommunications....228
Appendix: Integration of Technology....231

National Star Schools Goals and Objectives....249
Appendix: National Star Schools Goals and Objectives....254

Conclusions....274

IOWA DISTANCE EDUCATION ALLIANCE YEAR-END EVALUATION REPORT

July, 1996 - September, 1997

Prepared by
Nancy Maushak, Ph. D.
and Lynn Manternach

Introduction and Background

In 1992, the state of Iowa received a special statewide Star Schools grant to demonstrate the use of fiber-optic technology to provide live, two-way, full-motion interactive instruction which allows greater levels of interactivity than previous forms of distance instruction. The grant allowed the state to equip over 100 fully interactive video classrooms in community colleges, universities, and K-12 schools. By October, 1993, 103 two-way interactive video classrooms were connected to the Iowa Communications Network (ICN) and fully operational. In October, 1995 and again in October, 1996, Iowa was awarded an additional $4 million for further development of this statewide system. A partnership of Iowa educational institutions including the Iowa Department of Education, Iowa Public Television (IPTV), the state's three regent institutions, Iowa's 15 community colleges, the 15 Area Education Agencies (AEAs), and Local Education Agencies (LEAs) have worked together during both grants.

The Iowa project consists of four components, each responsible for completing specified activities. These four components are (1) Project Management, (2) the Communications and Resources Clearinghouse, (3) Area Education Agencies and Regional Partnerships, and (4) the Teacher Education Alliance (TEA). For the 1996 project, the Iowa partners defined six goal areas that have been modified from the goals of the 1995 project to reflect a increasing focus on curriculum and a decreasing focus on infrastructure. The six goal areas in 1996 were: (1) developing instructional materials to be used in distance education, (2) supporting training and access distance education resources, (3) providing training and technical support for distance education, (4) expanding access to and information about distance education, (5) supporting incorporation of distance education in colleges and universities involved in training future teachers, and (6) pilot school.

There are many models of evaluation as well as many methods of collecting data for evaluation. All are equally appropriate and dependent on specific project goals and objectives. The evaluation approach used for the evaluation of the Iowa Distance Education Alliance was the AEIOU model developed by Sorensen and Sweeney. Following is a brief explanation of this approach.

The AEIOU approach does not dictate what model of evaluation or methods of data collection are used. It simply provides a structure and guidance for the collection of data and the reporting of results. The AEIOU approach has five components:

(a) accountability;
(e) effectiveness;
(i) impact;
(o) organizational context; and
(u) unanticipated outcomes.

Each of these is explained in more detail below.

Accountability: Did the project team do what it said it was going to do?

Accountability simply attempts to determine if the activities listed in the goals and objectives of the project proposal have been accomplished.

Effectiveness: How well was it done?

Effectiveness looks past the mere fact that the activity was completed and attempts to determine how well the activity was done. The focus is on attitudes and knowledge.

Impact: What difference did the project make?

Impact focuses more on summative evaluation. Questions dealing with changes that have occurred because of project activities are included. This would apply to changes in behavior of an individual, a group or a system. Obviously, what type of change should occur is dependent on the goals, objectives, and activities of the specific project.

Organizational Context: What structures, policies, or events helped or hindered the project in accomplishing its goals?

This component focuses on events beyond the control of project management that either helped or hindered the achievement of project goals and objectives. Questions included in this component include:

- What helped in the achievement of the project goals and objectives?
- What made it difficult to achieve project goals and objectives?

Collection methods usually include interviews of key personnel or focus groups including the individuals most impacted by the project.

Unanticipated Outcomes: What happened that you did not plan or expect?

Sometimes, things happen or change as a result of the project that were not planned or anticipated. Under the impact component, planned changes based on project goals and objectives were evaluated. This component looks at those unplanned changes, either positive or negative, that occurred. The most useful methods of collecting data for this component are informal communications and observations.

Components of the Iowa Distance Education Alliance that are conducting their own evaluations (i.e. multimedia projects) receive training in the AEIOU approach. This permits multiple project reports to be summarized easily.

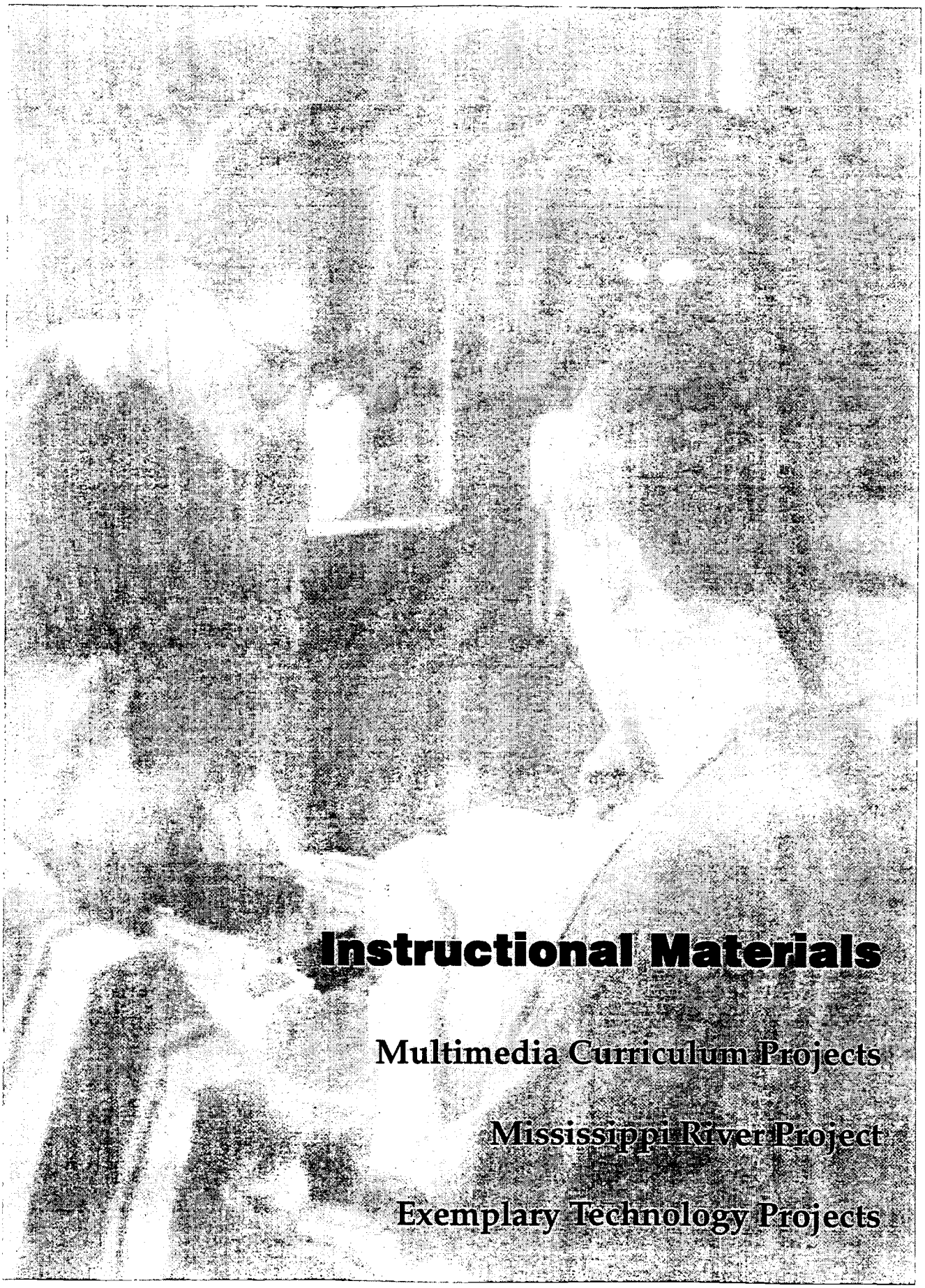
In 1997, the US Department of Education Office of Techology proposed a set of national goals and indicators to be used to measure the success of the individual Star Schools projects in meeting the objectives of the grant.

1. Deliver challenging and engaging content in core subjects.
2. Promote excellence in teaching through sustained professional development and integration of new and multiple technologies into the curriculum.
3. Improved teaching and learning through increased access to distance education.
4. Contribute to the available body of knowledge on use of technology to enhance learning to high standards for all students.

This report will adress these national indicators as a separate section toward the end of the evaluation report.

This report will summarize evaluation data for the Iowa Project from June, 1996 through September, 1997. Data were collected from each of the project components (Project Management, Clearinghouse, Regional Partnerships, and TEA) through a variety of methods

including written surveys, telephone interviews, record data, and collection of documents and artifacts. This report is organized and the data will be summarized by the Iowa Distance Education Alliance 1996 project goals. Supporting material for each goal is located at the end of the related section. Little impact data is available at this time however several impact measures are scheduled to be collected during Spring, 1998. Visits to each AEA in the state plus approximately 30 school districts are currently being planned. In addition, a look at where we have come since the beginning is in the works. One section of this report will summarize the available data by the national evaluation goals. The last section will provide some conclusions related to the project.



Instructional Materials

Multimedia Curriculum Projects

Mississippi River Project

Exemplary Technology Projects

Instructional Materials

Goal 1: Instructional materials for improvement of instruction in mathematics, science, foreign language, and other subjects such as literacy skills and vocational education utilizing distance education learning technologies will be developed and made available to educators and students of Iowa.

Objectives related to this goal include:

1. development of multimedia instructional products for K-12 ICN-related use:

   Six multimedia curriculum products, and

   Mississippi River curriculum project;

2. development of strategies to keep development of instructional materials continuing past the funding cycle; and
3. identification and dissemination of exemplary educational technology applications.

Materials, tables, and graphs related to this goal may be found at the end of this section.

Multimedia Curriculum Projects

The six multimedia curriculum projects funded in 1996 were completed in summer, 1997. These projects successfully developed curriculum that called for the use of a wide variety of technology.

Three of the six projects were selected for continued funding during the 1997 fiscal year. The focus of these three projects has shifted from curriculum development to dissemination and expanding involvement.

Accountability

- Six multimedia curriculum products have been developed with materials ready for distribution: two science; two careers/GED; one math; and one interdisciplinary.
- A total of 76 units were developed: seven career units; 12 chemistry/science units; five GED; nine interdisciplinary; and 43 math.
- Five projects produced high school level curricula; two projects produced materials for middle school; and one project produced materials for elementary level.
- Curricula produced employed a variety of technology including ICN, WWW, software, and graphing calculators.
- Staff development was a key component of five of the six projects and included workshops and regular team meetings.

Effectiveness

- Participation in multimedia curriculum projects included 46 school districts, three AEAs, three private colleges, three businesses, two community colleges, one public university.
- Approximately 100 teacher participated in the projects.
- Projects that were pilot tested received positive comments from both teachers and students.
- Projects were effective in producing real professional growth.
- Projects were effective in developing student-centered curricula employing diversity of teaching techniques and technology.

Impact

In evaluating the impact of the multimedia curriculum projects, it was necessary at this point in time to look at the impact of the process of developing curricula and the pilot testing of material. As materials are disseminated during 97-98, evaluation of the impact of the products will be conducted. In addition, requests for the materials and their use in schools will be measures of impact.

Change in students:

- There was evidence to indicate student achievement in five of the six projects.
- Students' attitudes toward the content area and toward technology were enhanced.
- Motivation levels were high.

Change in teachers:

- Teachers developed the skill to effectively use technology to enhance the subject matter and motivate learners.
- Teaching styles changed to include more student-centered instructional styles. This change in teaching style carried over into the teachers' other classes.
- Teachers gained a broader knowledge of the content area.
- Teachers felt rejuvenated which showed in all interactions with students.
- Teachers recognized advantages and disadvantages of using distance education and were interested in exploring new ways to use this technology to connect students.

Other changes:

- Expanded resources.
- Enhanced administrative support for technology and ICN.
- Enhanced public support of educational technology and ICN.
- Change in classroom environment.
- Presentations at state and national conferences.

Organizational Contexts

- Being able to use the ICN for meetings/planning was identified as being especially useful.
- Projects identified the support from administrators, parents, business was key in the successful completion of the projects. Technical assistance was also identified.
- Scheduling was a problem. This resulted from schools having different calendars and bell schedules.
- The time frame of the project forced project leaders to make decisions before they were really ready. Awards were made in late spring and moneys needed to be encumbered by the end of September.

Unanticipated Outcomes

- Students developed an interest in their distant classmates, schools, and communities.
- Students recognized the importance of the total High School experience.
- The use of the ICN to share presentations resulted in students wanting to produce a quality product. They wanted to be proud of the project they shared.
- The collaboration and adaptability of team members was unexpected, as was the teachers' growth in technology skills and content knowledge.

Mississippi River Curriculum Project

In addition to the six multimedia curriculum projects, a project to develop supplemental 5-8 grade curriculum components emphasizing, but not limited to, the study of the Mississippi River was initiated. National standards in math, science, social studies, and language arts will provide the basis for this interdisciplinary project.

Accountability

- 30 educators were employed as curriculum specialists to develop the Mississippi River Curriculum.
- Specialists averaged 17.3 years of teaching experience.
- 55.2% of curriculum specialists were female.
- The majority listed masters degree (62.1%) as highest level of education completed.
- Curriculum specialists represented middle school (33.3%), higher education (22.2%), and high school (18.5%).
- Science was listed as content area by 41.4% of curriculum specialists.
- Curriculum was developed and provided to media design specialist for the development and production of the multimedia format.

Exemplary Applications

The project was successful in identifying exemplary applications of technology in K-12 education. The project was effective in identifying exemplary applications that could be used at every educational level, in a variety of content areas, and that used a variety of media. The project also disseminated information to classroom teachers and other educators about the exemplary applications of technology.

Accountability

- Applications were distributed to all public and nonpublic K-12 schools in the state and all institutions of higher education.
- Applications were judged by a nine member team including representation from 4-year institutions, community colleges, AEA's and K-12 schools.
- 345 examples of technology use were identified and 25 were selected as exemplary applications. These 25 projects were provided with additional funding to continue activities.
- Information about the exemplary applications was placed on the IOWA Database and work is underway to create a searchable database of both 1995 and 1996 applications.
- A 1996 submitted applications booklet has been developed for distribution (3200 copies) and 3200 copies of the 1995 booklet were printed and distributed.

Effectiveness

- Among the technology application submissions were 135 from elementary schools, 155 from middle schools, 118 from high schools, and 34 from community colleges. Among the 25 applications identified as exemplary, there were three from elementary schools, 13 from middle schools, eight from high schools, and nine from community colleges.
- Subject areas covered in the funded exemplary applications included science (12), other (7), social studies (5), Language Arts/reading (4), Computer science/math (3) vocational education (2). fine arts (1), and family/consumer science (1).
- Applicants used a variety of media with computer software being the media most used. Many projects used a combination of media. Among those funded, 19 used computer software, 18 used the Internet, 17 used videotape, 14 developed and used multimedia, and 13 used the ICN.

Impact

- The total number of applications received in 1996 increased by 59% over 1995 submissions. All educational levels except high school showed a significant increase in the number of applications submitted. The number submitted from middle school level almost doubled (an increase of 99%). The number submitted from elementary and community college increased by 82% and 79% respectively.
- A total of nine sharing activities were held in comparison with only four last year.
- Seven of the sharing activities were held over the ICN and included a total of 232 sites. This is an increase of 174 sites over last year's activities.
- Two sharing activities were held on-site. These included a technology fair and a day at the Capitol to share with the governor and legislators.
- Total attendance at the sharing activities was approximately 600 as compared with last years total of 270.
- 53% of the educational technology winners were in counties with a poverty rate of over 15%.
- 47% of the educational technology winners were in school districts with Chapter 1 concentrations and minority enrollments of over 3.6%.

Multimedia Curriculum Projects

Summary of Funded Projects
Table: Accountability Summary
Table: Effectiveness Summary
Table: Impact Summary
Table: Organizational Context Summary
Table: Unanticipated Outcomes Summary
Table: School Districts Information
Summary of the Projects Selected for Continued Funding

Summary of the Funded Multimedia Curriculum Projects

Des Moines Area Community College
G.E.D. - The Next Generation
($192,740)

This project will result in the development of curricula and a support system for delivering high school equivalency and career planning to students using both the ICN and the World Wide Web. The project partners include the Des Moines Workforce Development Center and 33 LEAs: Adel-Desoto-Minburn, Ames, Ankeny, Ballard, Bondurant-Farrar, Carlisle, Collins-Maxwell, Colo-Nesco, Dallas Center-Grimes, Des Moines, Earlham, Indianola, Interstate 35, Johnston, Knoxville, Melcher-Dallas, Nevada, North Polk, Norwalk, PCM, Pella, Perry, Pleasantville, Saydel, Southeast Polk, Southeast Warren, Stuart-Menlo, Urbandale, Van Meter, Waukee, West Des Moines, Winterset, and Woodward-Granger.

Northern Trails AEA
Mathematics Project
($192,740)

This project will result in the development of "performance-based, technology-rich" interactive products in mathematics. The project is geared toward middle school grades (i.e. 6-7-8). The project partners include University of Northern Iowa, North Central Regional Educational Laboratory, and the Exemplars Program located in Vermont, as well as 10 LEAs: Charles City, Clear Lake, Lake Mills, St. Ansgar Middle School, plus five additional school districts.

Kirkwood Community College
Careers: Pathways for Success
($176,479)

This project would result in the development of a foundations course, "Career: Pathways for Success," for a proposed Career Academy. This would be geared for high school students and include components involving workplace skills, technology, teamwork, problem solving, and self-management. The course would utilize the ICN. The project partners include Grant Wood AEA and five LEAs: Cedar Rapids, College Community, HLV, Linn-Mar, and Marion Independent School District.

Iowa State University
Iowa Chemistry Education Alliance
($178,670)

The Alliance project proposes to develop concept-oriented units for chemistry to be used by high school teachers. Teachers and students would collaborate with others around the state. The project would utilize the ICN as well as other technologies. The project partners include Heartland AEA and several ISU departments as well as four LEAs: Ames, Des Moines, Perry, and West Des Moines Dowling.

Dubuque Community Schools
Environmental Science Curriculum
($192,740)

The project centers around the development of instructional units in environmental science. The units will utilize a variety of technologies and will be developed by student and teacher teams. Additionally, the goals include both involving the local communities in the development and a curriculum integration component. Both students and teachers will gain understanding in both content and the design process. The project partners include John Deere, Times-Mirror, the Finley Hospital, and three LEAs: Dubuque, Dubuque Metropolitan Schools, and Western Dubuque.

Area Education Agency 6
Instructional Unit Development
($190, 119)

The project involves the development, testing, publishing, and dissemination of 10 instructional units which are adapted from existing curricula. The adapted units will involve a variety of technologies, including the ICN, and will be geared toward elementary, middle, and high school students. The units are drawn from 145 project submissions from Area 6 teachers and will be developed by teacher-led teams. The project partners include University of Northern Iowa, Iowa Valley Community College, various local businesses, and 16 LEAs: Ackley-Geneva, Alden, BCLUW, BGM, East Marshall, Eldora-New Providence, Gladbrood, GMG, Grinnel-Newburg, Hubbard-Radcliffe, Iowa Falls, Marshalltown, Montezuma, South Tama, Wellsburg-Steamboat Rock, and West Marshall.

Multimedia Projects: Accountability Summary

Project	Units	Subject Area	Level	Technology	Materials Produced	Staff Development
Careers: Pathways for Success	6	Careers	High School	ICN	Print	Limited
Environmental Science Curriculum	4	Environmental Science	High School	ICN Software	Model for Curriculum Change	Workshops
Instructional Unit Development	9	Interdisciplinary	1 - Elementary 1 - 2nd-12th grade 3 - Middle School 4 - High School	ICN Software WWW	Print & CD	Workshops and monthly meetings
Iowa Chemistry Education Alliance	8	Chemistry	High School	ICN Software WWW	Print & Videos	Workshops and weekly meetings
GED: The Next Generation	6	5 - GED preparation 1 - careers	High School	ICN WWW	Print	Team Meetings
Mathematics Project	43	Built around 8 math standards	Middle School	Graphing Calculator Software	Print	Workshops and meetings

Multimedia Projects: Effectiveness Summary

Project	Partners	# of Students	# of Teachers	Highlights
Careers: Pathways for Success	Kirkwood CC AEA 5 - school districts	49	10	Student Portfolio Mock job interviews 15 career professionals Student centered
Environmental Science Curriculum	6 - schools 3 private colleges 3 businesses	NA	9	Student Centered Excitement/self-direction of students Learned about technology while learning about environmental science and vice-versa Positive student comments Positive teacher comments
Instructional Unit Development	13 school districts AEA	NA	45	9 projects chosen from 145 ideas Used new technology to adapt existing curricula Included all grade levels and variety of ability levels Included diversity of disciplines Team representation from across districts
Iowa Chemistry Education Alliance	4 school districts University	300	4	ICN sessions fun and interesting Connection with real-life Opportunity for collaboration Students had positive attitude toward ICN and chemistry
GED: The Next Generation	DMACC	15	NA	Recruitment methods limited enrollment Technology was not a reason for dropping out Small numbers allowed personalization Development of active web site (500 hits per month)
Transforming Middle School Mathematics	18 school districts AEA	NA	36	Staff training Positive attitudes toward calculators Strong professional growth

Multimedia Projects: Impact Summary

Project	Change in Students	Change in Teachers	Other
Careers: Pathways for Success	Exposure to many careers Recognize need for variety of computer skills Developed a more realistic view of economics All students in district have access to software not previously available		Purchase of software that would not have been purchased without the grant
Environmental Science Curriculum	Developed technology and cooperative learning skills High motivation level Developed ability to share information with others at a distance using the ICN equipment	Recognized afvantages and disadvantages of ICN, technology, change the way they taught in this class and in other area, curiousity among other staff members and need for sharing	Promoted enthusiasm and support from public in regards to ICN, expedited construction of ICN room, administration recognized advantages and disadvantages of ICN, technology and importance of ICN classroom "this was not just a luxury"
Instructional Unit Development	Student achievement Enhanced student attitudes toward use of technology	Effectively using technology to enhance subject, exposure to ICN generated interest in using interactive TV for connecting students	Change in curricula to include technological approaches and to enrich in ways not possible previously, expanded resources, use of ICN increased attendance at planning meetings
Iowa Chemistry Education Alliance	Student achievement Students were exposed to and used a variety of technologies	Teaching changed to include use of technology and more student-centered instructional styles, expanded knowledge, formed collaborative group	Presentations at state and national conferences
GED: The Next Generation	3 out of 15 students took GED 2 out of 15 students returned to school	Instructors were rejuvenated, carry over into all classes	Provided an alternative approach to reach at-risk learners
Transforming Middle School Mathematics	None available to date	Increased recognition of usefulness of Exemplars program, increased use and demand for quality software, change in teaching style, increased application of NCTM standards	Change in classroom environment

Multimedia Projects: Organizational Context Summary

Project	Helpful	Hindrances
Careers: Pathways for Success	Variety of technology students were able to experience.	Total number of sites and number of students; different school calendars; responsiblities of local monitor.
Environmental Science Curriculum	Administrative and local support; technical assistance	Scheduling; different school calendars; old school rivalries.
Instructional Unit Development	Involvement across region; use of ICN for planning and implementation;	Time frame of project.
Iowa Chemistry Education Alliance	Use of ICN for weekly meetings.	Scheduling.
GED: The Next Generation	Administrative support; reputation of Youth-At-Risk consortium; enthusiasm of project participants.	Time frame of project; recruiting students; difference in equipment at different ICN sites.
Transforming Middle School Mathematics	Release time for teachers;	Need to more actively involve administration.

Multimedia Projects: Unanticipated Outcomes Summary

Project	Students	Teachers
Careers: Pathways for Success	Interest in distant classmates, schools, and communities;reward of working with parents and/or grandparents; appreciation of total High School experience.	Positive attitude toward ICN and distance education in general.
Environmental Science Curriculum	Skill level in problem solving and use of technology exceeded expectations as did student enthusiasm for the technology; use of ICN generated pride in presentations.	Growth and adaptation related to the new curriculum and technology; enthusiasm for project continued; greatest enthusiasm in oldest teacher.
Instructional Unit Development		Collaboration among members; adaptability of participants; expanded skills and knowledge of participants.
Iowa Chemistry Education Alliance		Collaboration among members; adaptability of participants; expanded skills and knowledge of participants; applied for and received 2 small grants.
GED: The Next Generation		"Passionate" about creating quality materials; enthusiasm toward use of technology; renewed efforts to work with business; natural blending of topics.
Transforming Middle School Mathematics		

Multimedia Curriculum Projects: School Districts Information

AEA #	Iowa School District	Chapter 1 Concentration District	Minority Enrollment	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch	County Poverty Rate	Rural County <20k	District Enrollment <600	ICN Classrooms in District	Internet Site
1	Dubuque	X	>3.6% >250 students	X	25%-33%				1996 2	X
1	Western Dubuque	X							1996	X
2	Charles City	X			33.1%-50%	15.1%-20%	X		1996	X
2	Clear Lake		>3.6% <250 students							X
2	Lake Mills						X		1996	X
2	St. Ansgar						X		1996	X
5	Webster City	X			25%-33%		X		1996	X
6	Ackley-Geneva		>3.6% <250 students	X	25%-33%		X	X	1996	X
6	Alden		>3.6% <250 students		33.1%-50%		X	X	1996	X
6	BCLUW						X		1996	X
6	Brooklyn-Guernsey-Malcolm						X		1996 2	X
6	East Marshall								1996	X
6	Eldora-New Providence				25%-33%		X		1996	X
6	Gladbrook						X	X	1996	X
6	GMG						X	X	1996	X
6	Grinnell-Newburg		>3.6% <250 students				X		1993	X
6	Hubbard-Radcliffe				25%-33%		X		1996	X
6	Iowa Falls						X		1996	X
6	Marshalltown		>3.6% >250 students	X	25%-33%				1996	X
6	Montezuma						X	X	1996	X

Multimedia Curriculum Projects: School Districts Information *continued*

AEA #	Iowa School District	Chapter 1 Concentration District	Minority Enrollment	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch	County Poverty Rate	Rural County <20k	District Enrollment <600	ICN Classrooms in District	Internet Site
6	South Tama County		>3.6% >250 students	X	25%-33%		X		1993	X
6	Wellsburg-Steamboat Rock				25%-33%		X	X	1996	X
6	West Marshall								1996	X
10	Cedar Rapids		>3.6% >250 students	X	25%-33%				1996	X
10	College		>3.6% <250 students						1996	X
10	H-L-V						X	X	1995 - 1, 1996 - 2	X
10	Linn-Mar		>3.6% <250 students						1996	X
10	Marion Independent								1996	X
11	Adel-DeSoto-Minburn								1993	X
11	Ames		>3.6% >250 students	X					1993	X
11	Ankeny								1996	X
11	Ballard									X
11	Bondurant-Farrar									X
11	Carlisle									X
11	Collins-Maxwell							X		X
11	Colo-Nesco									X
11	Dallas Center-Grimes									X
11	Des Moines Independent		>3.6% >250 students	X	33.1%-50%				1996 - 5 1997-3	X
11	Earlham					15.1%-20%	X	X	1996	
11	Indianola								1993	X

Multimedia Curriculum Projects: School Districts Information *continued*

AEA #	Iowa School District	Chapter 1 Concentration District	Minority Enrollment	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch	County Poverty Rate	Rural County <20k	District Enrollment <600	ICN Classrooms in District	Internet Site
11	Interstate 35	X				15.1%-20%	X		1996	X
11	Johnston		>3.6% <250 students						1995	X
11	Knoxville						X		1996	X
11	Melcher-Dallas				25%-33%		X	X	1996	X
11	Nevada		>3.6% <250 students						1996	X
11	Newton						X			X
11	North Polk								1996	X
11	Norwalk								1996	X
11	PCM						X			X
11	Pella		>3.6% <250 students	X			X			X
11	Perry	X	>3.6% <250 students	X	33.1%-50%				1996	X
11	Pleasantville						X		1996	X
11	Saydel Consolidated		>3.6% <250 students		25%-33%				1997	X
11	Southeast Polk								1996	X
11	Southeast Warren	X								X
11	Stuart-Menlo	X					X		1996	
11	Urbandale		>3.6% <250 students	X					1996	X
11	Van Meter		>3.6% <250 students					X		X
11	Waukee									X

Multimedia Curriculum Projects: School Districts Information *continued*

AEA #	Iowa School District	Chapter 1 Concentration District	Minority Enrollment	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch	County Poverty Rate	Rural County <20k	District Enrollment <600	ICN Classrooms in District	Internet Site
11	West Des Moines		>3.6% >250 students	X					1995/1996	X
11	Winterset	X				15.1%-20%	X		1993	X
11	Woodward-Granger									

Summary of the Multimedia Curriculum Projects Selected for Continued Funding

Northern Trails AEA
Mathematics Project
($60,600)

This project will result in the development of "performance-based, technology-rich" interactive products in mathematics. The project is geared toward middle school grades (i.e. 6-7-8). The project partners include University of Northern Iowa, North Central Regional Educational Laboratory, and the Exemplars Program located in Vermont, as well as 10 LEAs: Charles City, Clear Lake, Lake Mills, St. Ansgar Middle School, plus five additional school districts.

This project will be expanded to include six more schools as well as the nonparticipating individuals from the current schools. Training and sharing opportunities will be provided Efforts will continue to integrate TI-82 graphing calculators into the middle school classroom.

Iowa State University
Iowa Chemistry Education Alliance
($81,000)

The Alliance project proposes to develop concept-oriented units for chemistry to be used by high school teachers. Teachers and students would collaborate with others around the state. The project would utilize the ICN as well as other technologies. The project partners include Heartland AEA and several ISU departments as well as four LEAs: Ames, Des Moines, Perry, and West Des Moines Dowling.

Collaboration with eight new schools will be implemented. Modules developed during Phase I will be implemented and evaluated.

Dubuque Community Schools
Environmental Science Curriculum
($33,180)

The project centers around the development of instructional units in environmental science. The units will utilize a variety of technologies and will be developed by student and teacher teams. Additionally, the goals include both involving the local communities in the development and a curriculum integration component. Both students and teachers will gain understanding in both content and the design process. The project partners include John Deere, Times-Mirror, the Finley Hospital, and three LEAs: Dubuque, Dubuque Metropolitan Schools, and Western Dubuque.

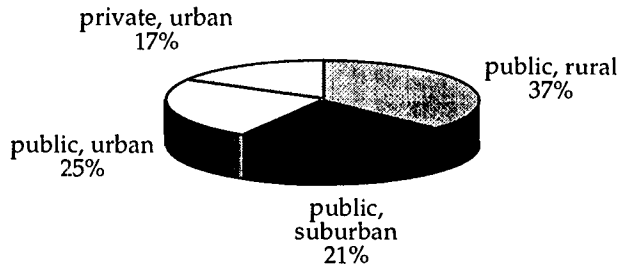
This project will be extended to three more teachers at the current schools. Plans are to also include three large city high schools, three medium city high schools, and four rural high schools throughout the state.

Mississippi River Project

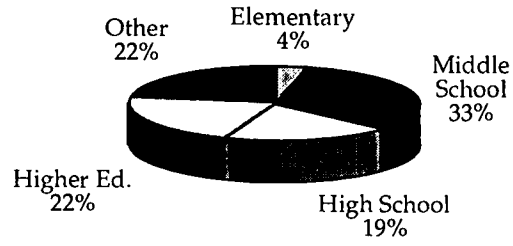
Charts: Background of Curriculum Specialists

Mississippi River Project: Background of Curriculum Specialists

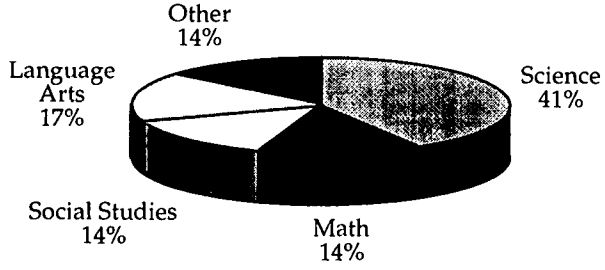
Public school, private school, rural, urban representation



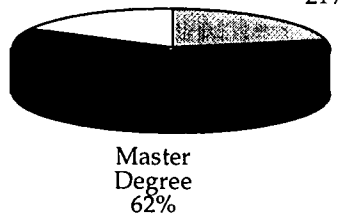
Current teaching level



Content area representation



Educational background



Exemplary Technology Projects

1996-1997 Timeline
Press Release: Booklet Availability
Application Form
Volunteer Judge Form
Rating Sheet
Showcase Award Presentation Announcement
Sharing Sessions Announcements
Press Release: Day at the Capitol
Summary of Award Recipients
Table: Summary of Sharing Activities
Table: District Information
Chart: Comparison of Educational Level on Submitted Projects
Chart: Comparison of Subject Area on Submitted Projects
Chart: Comparison of Media Used on Submitted Projects
Chart: Comparison of Educational Level on Educational Technology Winners
Chart: Comparison of Subject Area on Educational Technology Winners
Chart: Comparison of Media Used on Educational Technology Winners

Showcase on Educational Technology Projects: 1996-1997 Timeline

July 1996	**1995 showcase books printed (3200)**
August 1996	**Books and applications distributed** ***K-12 Schools*** ***Principals*** ***Media Specialists*** ***Superintendents*** ***AEAs*** ***Higher Education*** ***Vice-Presidents for Academic Affairs*** ***Technical Coordinators***
Sept. 1996	**Meeting with AEAs** **Books sent to legislators** **Press release**
Oct. 1996	**Awards judging**
Nov. 1996	**Winners notified** **Press Release**
Dec. 1996	**Awards Presentation**
Jan. 1997	**Technology Fair**
Feb. 1997	**AEA In-service Day** **Sharing Session** **A Day at the Capitol**
Mar. 1997	**Sharing Session**
April 1997	**3 Sharing Sessions**
May/June 1997	**Prepare books for printer**
July 1997	**1996 Showcase books printed (3200)**
Aug. 1997	**Test showcase database on Internet**
Sept. 1997	**Books and applications distributed**

************Press Release************

Showcase on Educational Technology in Iowa Schools booklet now available

The Iowa Educational Technology Training Institute at the University of Northern Iowa and the Office of Technology at the Department of Education are pleased to present the first volume of the Showcase on Educational Technology in Iowa Schools. The booklet is based on the call for applications of technology use in classrooms in Iowa during the fall of 1995. Applications were reviewed and fifteen projects from K-12 schools and four higher education projects were awarded for their exemplary or innovative use of technology in the classroom. All the applications received are recorded in the booklet as well as expanded descriptions of the winning projects from both K-12 and higher education.

The booklet will be sent to the principal of each school in early September - ask your principal to see a copy. A copy of the booklet will also be sent to each AEA and superintendent. This booklet is just a snap shot of the technology projects going on in the state of Iowa. Is your school represented? If not, please have teachers using technology answer the call for applications of *exemplary uses of technology in the classroom* for this 1996/97 school year. A copy of the application form for this year will also be sent to the principal and media specialist serving the school. Please make copies of the application form and send or fax the information by *October 4, 1996* to:

Iowa Educational Technology Training Institute
Showcase on Educational Technology Use - Attn: Diane Gross
University of Northern Iowa
Cedar Falls, IA 50614-0301

If you have questions regarding your project or responding to the application, please contact the Institute at (319) 273-2309 or fax questions to (319) 273-2917.

The booklet is a beginning - a record of the information received in the first call and an opportunity for educators to share what and how technology is being used in classrooms all over the state. The booklet should be considered as a reference and way of connecting and sharing ideas with other educators. Hopefully, it will enhance the learning environment so that our students have successful and exciting educational experiences.

Iowa Educational Technology Training Institute
Center for Educational Technology Cedar Falls, Iowa 50614 (319) 273-2309 FAX (319) 273-2917
e-mail IETTI@edtech.com www http://www.IETTI.com

Showcase on Iowa Educational Technology Use -
Classroom Project Application Form

Please complete ONE form for each exemplary technology project at your school. Feel free to make as many copies of the form as needed. Fold, staple and mail to the address listed on the back of the form. Thank you for your response by October 4, 1996.

Phone number: ( )

School name: _____

Fax number: ( )

School address: _____

_____

Contact person: _____ Phone number: ( )
(if different from above)

Media specialist(s) name(s): _____

Teacher(s) name(s): _____
email address: _____

Please check ALL technologies used in the classroom application or project :

____ use of ICN
____ use of broadcast TV
____ use of CD-ROM disc
____ use of laser disc
____ development of multimedia
____ use of other non-print materials
____ simulation and/or virtual reality
____ use of Internet or other on-line service
____ use of videotape or series
____ use of computer software
____ use of multimedia
____ development of software
____ collaborative project with business/industry
____ other uses of technology - please specify:

Short description of the project or application (please submit additional pages, if necessary):

Recommended subject area: _____ Grade level/audience: _____

Equipment used: (list make and model of equipment such as computers, laser disc players, CD)

_____

_____

Software Title: _____

Software is available at: __ our school ___ AEA __ library __ other

Showcase on Educational Technology
Volunteer Judge Form

The 1996-97 Showcase on Educational Technology applications have come in and we are interested in finding people who are willing to review the applications and judge them on merit for the Star Schools money. The review process is two-tiered: the first review session will separate out those applications which are exemplary and merit a second look; the second review session will be rating/scoring the applications and agreeing as a team to award 15 projects in K-12 and 10 projects in higher education. We are looking for 6-7 people per session. You will be paid $100.00 per day to cover expenses and travel to Ankeny. *If you are interested in reviewing applications, please complete the form indicating which session you prefer and call either Diane Gross or the Institute as soon as possible.* Thank you for your support!

****

NEW TIME - NEW PLACE - NEW TIME - NEW PLACE - NEW TIME - NEW PLACE

WHERE: Woodside Office, Suite 26 (Heartland AEA 11)
6900 NE 14th, Ankeny, IA

WHEN: Session One - October 29, 1996 1 - 4 pm Tuesday
Session Two - October 30, 1996 10 am - 3 pm Wednesday

****

I would like to judge at: (check one)

____ Session One - October 29, 1996 1 - 4 pm

____ Session Two - October 30, 1996 10 am - 3 pm

Name: _____

Title: _____ Institution: _____

Phone: _____ Fax: _____

(best time to reach me:)

Email: _____

Please contact Diane Gross at 319-363-5024 or email: grossd@crpl.cedar-rapids.lib.ia.us *for further information. Please fax this form to:* Iowa Educational Technology Training Institute Attn: Diane Gross *at 319-273-2917* OR *fax directly to Diane Gross at 319-363-0265. You may also send the form by mail to:* Iowa Educational Technology Training Institute
Showcase on Educational Technology Review - Attn: Diane Gross
University of Northern Iowa
Cedar Falls, IA 50614

RATING SHEET

Project # _____

Think of these criteria as you review each project:

* will this project impact the student/learner in new/different ways?
* is the project a collaborative effort with other groups/students/locales/etc.?
* does the project span across the curriculum? multidisciplinary use?
* does the learning experience happen outside of the classroom, ie., workplace, community?
* is this a development project (software/curriculum development)?
* is it an innovative use of existing software?
* does the project make use of a singular technology? multiple technologies?
* does this project merit recognition ($1000 to use to further the project)?

RATING
(circle one)

1 low

2

3

4 high

RATING SHEET

Project # _____

Think of these criteria as you review each project:

* will this project impact the student/learner in new/different ways?
* is the project a collaborative effort with other groups/students/locales/etc.?
* does the project span across the curriculum? multidisciplinary use?
* does the learning experience happen outside of the classroom, ie., workplace, community?
* is this a development project (software/curriculum development)?
* is it an innovative use of existing software?
* does the project make use of a singular technology? multiple technologies?
* does this project merit recognition ($1000 to use to further the project)?

RATING
(circle one)

1 low

2

3

4 high

RATING SHEET

Project # _____

Think of these criteria as you review each project:

* will this project impact the student/learner in new/different ways?
* is the project a collaborative effort with other groups/students/locales/etc.?
* does the project span across the curriculum? multidisciplinary use?
* does the learning experience happen outside of the classroom, ie., workplace, community?
* is this a development project (software/curriculum development)?
* is it an innovative use of existing software?
* does the project make use of a singular technology? multiple technologies?
* does this project merit recognition ($1000 to use to further the project)?

RATING
(circle one)

1 low

2

3

4 high

The following sites have been reserved for the Showcase Award Presentation on Tuesday, December 17, 1996 4:00-5:00 p.m.

Dunlap-Boyer Valley High School
1102 Iowa Avenue
Dunlap, IA

University of Northern Iowa
Schindler Education Center, Room 130C
Cedar Falls, IA

Davenport Public Library
321 Main Street, Mtg Room A
Davenport, IA

Northeast Iowa Community College
10250 Sundown Road, Room 139
Peosta, IA

Ottumwa High School
501 E 2nd
Ottumwa, IA

Forest City High School
206 West School, Room 328
Forest City, IA

Dubuque High School
1800 Clarke Avenue
Dubuque, IA

Sheffield-Chapin High School
Sheffield, IA

Fort Dodge National Guard
RR 2 Box 54
Fort Dodge, IA

University of Iowa
Classroom #3
Iowa City, IA

Oelwein Jr. High School
300 12th Avenue SE, Room 27
Oelwein, IA

Grundy Center High School
1006 M Avenue, Room 34
Grundy Center, IA

Sioux Center High School
550 9th Street NE
Sioux Center, IA

Iowa State University
Classroom #4
Ames, IA

Ankeny High School
1302 NW Ankeny Blvd
Ankeny, IA

****

Please complete and return this reservation sheet indicating from which site you will be attending the award presentation. Thank you for returning this form by *December 9, 1996.*

School Name: _____

ICN Site you will be attending from: _____

Approximate number of people attending: _____

Please fax this form to Doreen Hayek at (319) 273-2917 or mail to University of Northern Iowa, Iowa Educational Technology Training Institute, Cedar Falls, IA 50614-0301.

Sharing Sessions
Confirmation of dates and times

Please complete the following information and confirm the date and location specified for sharing your project on the ICN. Please RSVP by February 7, 1997 by faxing the form or calling with the information. Please send the information to:

Iowa Educational Technology Training Institute
Attn: Diane Gross - Sharing Session Confirmation
University of Northern Iowa, Cedar Falls, IA 50614-0301
Phone: 319-273-2309 Fax: 319-273-2917

School name: _____ Phone number: ( )

School address: _____

_____

Contact person: _____ Phone number: ( )

Title of project: _____

We will attend the sharing session session as listed. _____ YES _____ NO
Comments:

****

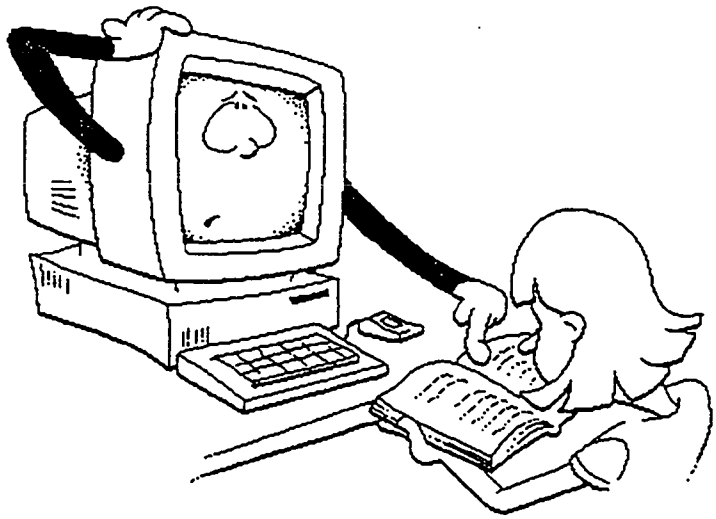
February 20, 1997
4-5 pm
◊ Woodbine Elementary at Woodbine
◊Briggs Elementary at Maquoketa
◊Ottumwa HS at Ottumwa 1

March 27, 1997
4-5 pm
◊Rockwell-Swaledale at Mason City 1
◊Table Mound School at Hempstead HS
◊Washington Irving at Waverly

April 2, 1997
4-5 pm
◊ Fort Dodge HS at HS
◊Forest City MS at Forest City
◊Sioux Center MS at Sioux Center HS

April 10, 1997
4-5 pm
◊Northwest JHS at Iowa City CSD
◊Grundy Center HS at Grundy Center
◊Wilson Elementary (Davenport) at Bettendorf HS

April 17, 1997
4-5 pm
◊Cedar Falls HS at HS
◊Oelwein HS at Oelwein
◊Kittrel Elementary at Waterloo



Please post in your building

Showcase on Educational Technology Use in Iowa Schools

Celebrate technology use in classrooms! Join us on the ICN as some of the Showcase on Educational Technology award winners for the 1996/97 school year share their use of technology in the classroom. There is *no charge* to attend the event at an ICN site but you must register. Please fax or send the registration to the Institute at the address below by February 17, 1997

When: **February 20, 1997 at 4 to 5 PM**

Where: **ICN sites in Iowa**

What: **Showcase on Educational Technology - Sharing Sessions**

Iowa Orphan Train Project at Briggs Elementary
Anatomy Tech Days at Ottumwa High School
Iowa Sesquicentennial Project at Woodbine Elementary

Other Sharing Session dates: March 27, April 2, 10 and 17, 1997 at 4-5 pm

The program willoriginate from the University of Northern Iowa. The following ICN sites have been requested:

Dept. Of Ed (Grimes)	Ottumwa 1	Maquoketa	Fort Dodge HS
Grundy Center	Sioux Center HS	Forest City	Oelwein
Waverly	Cedar Rapids AEA	Woodbine	Iowa City CSD

Join us as we share ideas on the use of technology in Iowa schools. Reserve an ICN site near you by calling Buddy Sherbet with your reservation at 319/273-7188. Fax: 319/273-7022

School: _____ Phone: _____

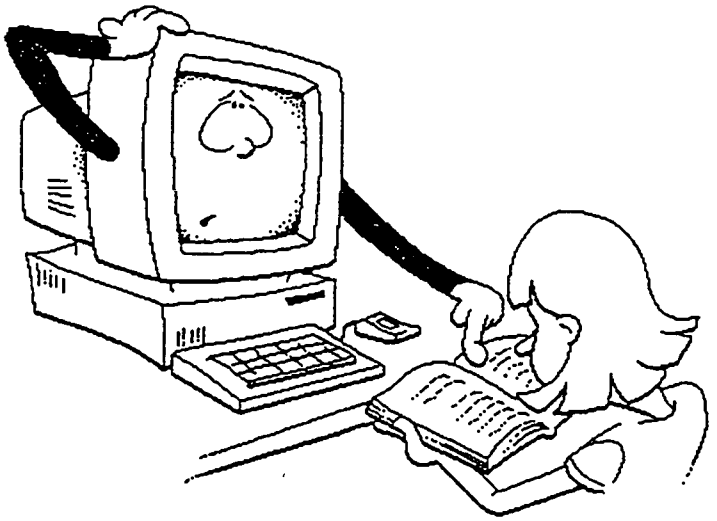
Contact: _____ Fax: _____

We would like to schedule this ICN site:_____

Number of people attending: _____

For more information, contact Doreen Hayek at the Institute at 319-273-2309 or Diane Gross at 319-363-5024 or email: gross.diane@mcleod.net

Sponsored by the Iowa Educational Technology Training Institute and the Department of Education with Star Schools funding



Showcase on Educational Technology Use in Iowa Schools

Celebrate technology use in classrooms! Join us on the ICN as some of the Showcase on Educational Technology award winners for the 1996/97 school year share their use of technology in the classroom. There is *no charge* to attend the event at an ICN site but you must register. Please fax or send the registration to the Institute at the address below by March 19, 1997

When: **March 27, 1997 at 4 to 5 PM**

Where: **ICN sites in Iowa**

What: **Showcase on Educational Technology - Sharing Sessions**

Devonian Age Fossils at Rockwell-Swaledale CSD
Table Mound Astronomy club at Table Mound School
Road/Bridge Construction Project at Washington Irving School

Other Sharing Session dates: April 2, 10 and 17, 1997 at 4-5 pm

The program will originate from the University of Northern Iowa. The following ICN sites have been requested:

Dept. Of Ed (Grimes)	Cresco HS	Ottumwa 1	Maquoketa	
Fort Dodge HS	Hempstead HS	Waverly	Price Lab School	
Mason City 1	Dubuque AEA	Garnervillo HS	Oelwein	
Sioux Center HS	Cedar Rapids AEA	Woodbine	Iowa City CSD	
Manchester HS	New Hampton HS	Waukon HS		

Join us as we share ideas on the use of technology in Iowa schools. Reserve an ICN site near you by calling Buddy Sherbet with your reservation at 319/273-7188. Fax: 319/273-7022

School: _____ Phone: _____

Contact: _____ Fax: _____

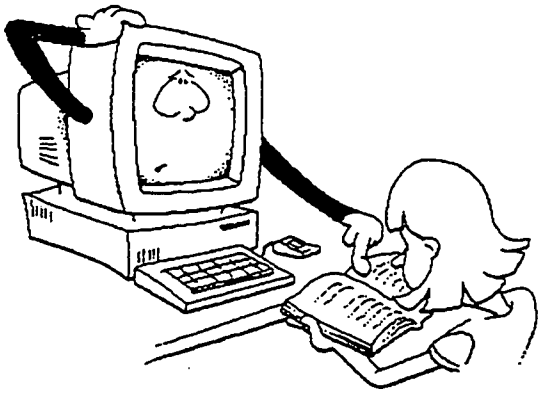
We would like to schedule this ICN site:_____

Number of people attending: _____

For more information, contact Doreen Hayek at the Institute at 319-273-2309 or Diane Gross at 319-363-5024 or email: gross.diane@mcleod.net

Sponsored by the Iowa Educational Technology Training Institute and the Department of Education with Star Schools funding

Please copy and share !



Please post in your building

Showcase on Educational Technology Use in Iowa Schools

Celebrate technology use in classrooms! Join us (IETTI - Iowa Educational Technology Training Institute) on the ICN as some of the Showcase on Educational Technology award winners for the 1996/97 school year share their use of technology in the classroom. There is *no charge* to attend the event at an ICN site but you must register. Please fax or send the registration form to IETTI.

Sharing Sessions on the ICN at 4 - 5 pm all three dates

April 2

Technology Today at Forest City MS
Business Courses at Fort Dodge HS
Live from Mars at Sioux Center MS

April 10

Music Central at Northwest JHS
Multimedia presentation at Oelwein MS
Temperatures across miles at Wilson Elem

April 17

Using technology to teach technology at Cedar Falls HS
Grundy Center homepage at Grundy Center HS
Living History of Iowa at Kittrell Elementary

The program will originate from the University of Northern Iowa. *Please make sure you are registered for each day you wish to participate.* Reserve an ICN site near you by completing the form and mailing to:
IETTI/ITS, CET 207, Cedar Falls, IA 50614-0301. Fax this form to: 319/273-7022 or call Buddy Sherbet with your reservation at 319-273-7022 (email: buddy.sherbet@uni.edu).

School: _____ Phone: _____

Contact: _____ Fax: _____

We would like to schedule this ICN site:_____

Registration for: _____ April 2 only _____ all THREE sharing sessions

_____ April 10 only

_____ April 17 only

For more information, contact Diane Gross at 319-363-5024 or by email: gross.diane@mcleod.net or Doreen Hayek at the Institute at 319-273-2309.

Sponsored by the Iowa Educational Technology Training Institute and the Department of Education with Star Schools funding

******** PRESS RELEASE *******

On February 26, 1997 from 1-4 pm at the Capital Building in Des Moines, there will be an exhibit of Showcase on Educational Technology projects from the 1996-97 awards. The purpose of the exhibit is to highlight for legislators and the Governor how technology is being used in Iowa classrooms. This will be an opportunity for schools to present technology projects. Ten K-12 schools and three institutions of higher education have volunteered to bring equipment and students involved in the projects. The Governor is slated to view the projects and talk with schools from 1:15 - 1:45 pm. Students are writing to their legislators inviting them to visit the display on that day. Here is a list of the schools and their project titles:

Briggs Elementary School	Title: "Iowa Orphan Train Project"
Cedar Falls High School	Title: "Using Technology to Teach Technology"
Forest City Middle School	Title: "Technology Today course"
Kittrell Elementary School	Title: "Living History of Iowa"
Oelwein Middle School	Title: "Multimedia presentation with Rock Point, AZ"
Ottumwa High School	Title: "Anatomy Tech Days"
Northwest Junior High School	Title: Music Central"
Rockwell-Swaledale CSD	Title: "Devonian Fossils
Sioux Center Middle School	Title: "Live from Mars"
Woodbine Elementary	Title: "Iowa Sesquicentennial"

Iowa State University (ISU)	Title: "Global Change: A Web-based course"
Iowa State University (ISU)	Title: "Convergence of Vet Grand Rounds and ICN Facilities"
University of Northern Iowa (UNI)	Title: "UNILinks"

1996 Showcase on Educational Technology
Award Recipients

K - 12 schools

School name: Briggs Elementary School
Phone number: (319) 652 - 4996
Fax number:
School address: West Quarry St., Maquoketa, IA 52060

Contact person: Merry Kahn
Phone number:

Media specialist(s) name(s): Merry Kahn

Teacher(s) name(s): Sheny Bickford, Jane Long, Karen Penningroth
email address: mkahn@mail.ms.maquoketa.kl2.ia.us

Recommended subject area: cross-curricular/social studies
Grade level/audience: 3 - 12

Description: **Iowa Orphan Train Project** was done in Spring 1996. Third grade teachers and the media specialist teamed to initiate this local history project on orphan trains (a Carver Grant project). Students used the library and county museum to research print materials, then interviewed local residents who came to our area on an orphan train. The local project soon expanded to a national project as we began hearing from orphan train riders from as far away as New Jersey. Students developed a Hyperstudio stack and web page (http://www.maquoketa.kl2.ia.us/orphan-train.html) to share findings and encourage others to collect similar information for the Sesquicentennial. Four schools exchanged information on the ICN and had an interesting interview with three orphan train riders.

School name: Cedar Falls High School
Phone number: (319) 277 - 3100
Fax number:
School address: 1015 Division Street, Cedar Falls, IA 50613

Contact person: Charles Lundeen (dept. chair)
Phone number:

Media specialist(s) name(s): David Buellers, Sue Davis, Kim Traw

Teacher(s) name(s): Charles Lundeen, William Paup, William McKinley
email address:

Recommended subject area: Industrial Technology
Grade level/audience: 10 - 12

Description: **Using Technology to Teach Technology** is a project focused on updating the metals manufacturing and energy and power programs with suitable technology reflecting changes taking place in the these fields and provide a link between technologies relevant to both programs. The programs employ various computer based instructional modules to teach basic content and competencies common to both manufacturing and energy-power related fields. Computer-based and hands-on instruction is supplemented through the use of textbooks, videotapes, and laser disc programs. Students have the opportunity to use CAD concepts to draw a machine part, download to a lathe or mill and produce the part. Not only do the students gain better

understanding of the use of computers and computer-aided machining, they will be better prepared to enter the fields of manufacturing and energy and power.

School name: Forest City Middle School
Phone number: (515) 582 - 4772
Fax number:
School address: 216 West School Street, Forest City, IA 50436

Contact person: Donald G. Saarie/Lee Hinkley - Principal
Phone number:

Media specialist(s) name(s):

Teacher(s) name(s): Donald G. Saarie
email address:
Recommended subject area: Technology
Grade level/audience: 6 - 8

Description: The course, " Technology Today" makes **use of Technology to Teach Technology** and challenges students to discover the underlying principles of technology, Students enrolled in " Technology Today" work in teams on a company style format involving a a continuous improvement style of management. Students are grouped and rotated through learning modules based on a ten-day curriculum. Reading, interpretation, teamwork, problem-solving, and improvement processes will be experienced by all students. This course is designed to flow from the home high school to the Central Campus to post secondary education or the job market.

School name: Fort Dodge Senior High
Phone number: (515) 955 - 1770
Fax number: (515) 955 - 3374
School address: 819 N. 25th St., Fort Dodge, IA 50501

Contact person: Judy Payne
Phone number: (515) 576 - 0877

Media specialist(s) name(s): Steve Cook

Teacher(s) name(s): Judy Payne
email address: jpayne@aea5.kl2.ia.us

Recommended subject area: Bus./Gen. Ed. Lang. Arts
Grade level/audience: 9 -12

Description: **Business Communication and Technologies Course 1 & 2** were developed for five reasons: (1) school improvement concepts/reform and technology should go hand-in-hand; (2) a classroom can become "a caring community of self-managed, engaged, self-assessing, life-long learners"; (3) to weave the SCANS report and District values, beliefs and exit outcomes into both courses; (4) the need for Research and Development to help the business education department reinvent itself, and (5) to help all FDHS teachers incorporate technology and best practices into all curriculum areas. Students learn Hyperstudio, Internet skills and become a class expert" on one or more HyperStudio compatible program(s) in order to develop and present a multimedia project and communicate their message.

School name: Grundy Center High School
Phone number: (319) 824-5449
Fax number: (319) 824 - 6415
School address: 1006 M Avenue, Grundy Center, IA 50638

Contact person: Don Osterhaus
Phone number:

Media specialist(s) name(s): Don Osterhaus

Teacher(s) name(s): Don Osterhaus and Bob Munson
email address: dono@grundy-center.kl2.ia.us

Recommended subject area: Language Arts/Library
Grade level/audience: 6 - 9

Description: A variety of electronic media have been used in a project to promote reading including the development of the **Grundy Center Homepage** (http://www.grundy-center.kl2.ia.us). The home page was designed for the Iowa Teen Award (ITA) program, a comniittee of the Iowa Educational Media Association (IEMA) dedicated to promoting quality young adult literature to Iowa students in grades six through nine. After assisting in the design of the web page, students are responsible for maintaining the interactive page. Students accessing the home page can submit their own reviews of ITA books with the best reviews sent to the local "webmasters" and posted to the home page. The second phase involves video booktalks, short videos produced by students that promote books. In September, 40 ICN sites in the state participated in a promotional program on the ITA.

School name: Kittrell Elementary School
Phone number: (319) 291 - 4859
Fax number:
School address: 1520 Easton, Waterloo, IA 50702

Contact person: Carol Boyce
Phone number:

Media specialist(s) name(s): Sharon Stiles

Teacher(s) name(s): Carol Boyce and Jenny Nissen
email address:

Recommended subject area: Social Studies
Grade level/audience: 3 - 5

Description: Students in the gifted program and a behavior disabled classroom participated in a project in which they compiled a **Living History of Iowa** using data obtained in partnership with a local care facility. A computer and modem placed at Friendship village allowed students and elderly residents to explore how life in Iowa has changed. Students learn how to use America Online (AOL), then train residents. Students learn to use Alpha Smarts, the Quick Take camera, and Hyperstudio to develop presentations. Students conducted online interviews with the residents through AOL , took photos, analyzed the data then developed a program about the project. A dramatization "Then and Now" was performed based on the interviews.

School name: Northwest Junior High School

Phone number: (319) 339 - 6827
Fax number: (319) 339 - 5728
School address: 1507 8th St., Coralville, IA 52241

Contact person: Bryce Hansen
Phone number:

Media specialist(s) name(s): Susan Richards

Teacher(s) name(s): Janice Shields
email address: Shields@iowa-city.kl2.ia.us
Recommended subject area: Music
Grade level/audience: 7

Description: Iowa City Junior high schools, working collaboratively with West Music Company, will refine and institutionalize an interactive, hands-on, multi-disciplinary general music curriculum that is technology based, **Music Central**, for all students in grades 7 and 8. Individual curricular units enable students to explore the use of technology and instrumentation of modem musicians while learning concepts from the existing general music curriculum in a more innovative, hands-on way. Students use interactive computer sequencing software and MIDI, CD ROM, video and electronic keyboards to learn concepts and assess achievement of objectives.

School name: Oelwein Middle School
Phone number: (319) 283 - 3015
Fax number: (319) 283 - 4497
School address: 300 12th Avenue SE, Oelwein, IA 50662

Contact person: Connie Miller
Phone number:

Media specialist(s) name(s): Connie Miller

Teacher(s) name(s): Joe Griffith, Karla Duff, Jeanne Danielson, Norma Stewart, Mark Levin, Vivian Rourke
email address: purple@trxinc.com

Recommended subject area: English, Science, Social Studies
Grade level/audience: 6th and up

Description: The Oelwein sixth grade class is creating a **multimedia presentation in conjunction with Rock Point, Arizona**, a Navajo reservation, demonstrating the similarities and differences between the two cultures. Emphasized are traditional ways of agriculture education, holidays and celebrations and individual biographies. Information about each other and parts of the developing projects will be exchanged via the Internet. The final multimedia project will also be sent via the Internet.

School name: Ottumwa High School
Phone number: (515) 683 - 4444
Fax number: (515) 682 - 7528
School address: 501 E. Second, Ottumwa, IA 52501

Contact person: Gail B. Wortmann Phone number:

Media specialist(s) name(s): Linda Cornelius

Teacher(s) naime(s): Gail B. Wortmann
email address: wortmanng@aeal5.kl2.ia.us

Recommended subject area: Anatomy/Physiology
Grade level/audience: 10 - 12

Description: On **Anatomy Tech Days** students take advantage of Anatomy information available on CD ROMS, laser discs, computer programs, videos, on-line projects, Internet and online projects. Each student is accountable for what they have investigated and learned. The focus of learning is based on each student's needs and interests. The Anatomy on-line project will involve students at Ottumwa HS and 12 other states in activities which incorporate research on the Net, writing, email or bulletin board communication, and problem-solving in area of high school human anatomy.

School name: Rockwell-Swaledale CSD
Phone number: (515) 822 - 3234
Fax number: (515) 822 - 3273
School address: 210 South 2nd Street, P.O. Box 60, Rockwell, IA 50469

Contact person: Ron Frank
Phone number:

Media specialist(s) name(s): Harold Price

Teacher(s) name(s): Ron Frank, Darlene Boehlie, Carolou Staley, Doug Sheriff
email address: rebels@netins.net

Recommended subject area: Enviromnental Education
Grade level/audience: 5 - 12

Description: **Devonian Age fossils Presentations** is an environmental education project that studies the geology of a nearby quarry. The project involves students from two school districts at both the elementary and secondary level. Through field study, students will study, gather, identify and develop presentations on the Devonian age fossils. Among the tasks involved will be: presenting and assisting others on the ICN, developing and assisting younger students with multimedia presentations using Hyperstudio and providing mentoring experiences. Students will be assessed on content, attitude toward science and attitude toward distance learning activities.

School name: Sioux Center Middle School
Phone number: (712) 722 - 3783
Fax number: (712) 722 - 2986
School address: 550 9th Street NE, Sioux Center, IA 51250

Contact person: Colette Wassom Scott
Phone number: (800) 352 - 4907 ext. 182
email: letab@nwicc.cc.ia.us
Media specialist(s) name(s):

Teacher(s) name(s): Lucy Marske
email address: lmarske@mtcnet.net

Recommended subject area: Science

Grade level/audience: 6th grade

Description: Passport to Knowledge, NASA, NSF, Jet Propulsion Laboratories, and the Planetary Society sponsor "**Live from Mars**" electronic field trips. The science classes will be part of two live NASA TV broadcasts that will enable students to interact with scientists, engineers, and managers of Mars global Surveyor and Mars Pathfinders missions. In the **Red Rover Red Rover** project students will design and build a model rover using Lego Dacta kits that can be driven over a student designed and created model of a Mars landscape. Using specially designed computer software, the Internet, and the ICN, the rovers can be "driven" remotely from other sites.

School name: Table Mound School
Phone number: (319) 588 - 8354
Fax number: (319) 588 - 8421
School address: 100 Tower Drive, Dubuque, IA 52001

Contact person: Joseph Dolan Phone number:
Media specialist(s) name(s): Sandy Clark

Teacher(s) name(s): Joseph Dolan and Sandy Clark
email address:

Recommended subject area: Science/Astronomy
Grade level/audience: 6th grade

Description: The **Astronomy Club of Table Mound School** in conjunction with Mt. Wilson observatory in California is taking pictures of deep space objects using their 24 inch telescope commanded through the use of an IBM Eduquest computer, modem and software. Students have been capturing images for about a year and have a portfolio of about 25 images. The school hopes to purchase a telescope interface to connect their own 6 inch telescope to a computer to locate objects faster. This will change the manually driven telescope to computer driven using Software Bisque's *The Sky software*. In the future, the club hopes to be involved with the "Live from Mars" and Red Rover Red Rover projects.

School name: Washington Irving Elementary
Phone number: (319) 352 - 2658
Fax number:
School address: 213 6th Street SW, Waverly, IA 50677

Contact person: Connie Schrupp (principal of two schools)
Phone number: (319) 885 - 4312
Media specialist(s) name(s): Barb MacNEllan

Teacher(s) name(s): Liesa B. Bailey
email address: irveagle@corenet.net

Recommended Subject Area: science/math/social studies
Grade level/audience: 6, 7, 8

Description: Students board buses to the road and bridge construction site west of town led by the Technical Inspector and subcontractor to discover the geological aspects for preparing the roadbed in the **Road and Bridge Construction Project**. The students use a Kodak DC40 camera to record exposed ground and create slide shows of the site on computers in the classroom. They check the DOT Bulletin Boards and communicate via the Internet with engineers in Waterloo and Ames. Students interview engineers, contractors,

DOT Technical Inspectors, subcontractors city planners and parents involved in construction. SimCity (CD), Bridges (tutorial), and and Interactive Physics programs allow students to build bridges and test them on screen. They also build bridges with straws, toothpicks and spaghetti.

School name: Wilson Elementary
Phone number: (319)391 - 0904
Fax number:
School address: 2002 N. Clark St., Davenport, IA 52806

Contact person: Kory Schoenhard
Phone number: (319) 386 - 4070

Media specialist(s) name(s): Paula Gadient

Teacher(s) name(s): Kory Schoenhard
email address: compuserve 70312,575

Recommended subject area: math/science
Grade level/audience: 3 - 8

Description: The **Temperature across the Miles Project** shares daily temperatures with classrooms in the U.S. Data shared through the use of email on Compuserve online service is used for both graphing and statistics units. As a participant in the 1995 Iowa governor's Conference on Math and Science using Technology, the Davenport team chose to investigate technology and software to help teachers use data and state representation in their classrooms. MacStat software, Apple Presentations Systems and a Stylewriter printer assisted in printing out statistics and line graphs for each state temperatures. The graphs stimulated discussion. The culminating activity is to bring a local TV meteorologist to explain temperature changes across the United States.

School name: Woodbine Elementary
Phone number: (712) 647 - 2440
Fax number: (712) 647 - 2526
School address: 5th and Weare, Woodbine, IA 51579

Contact person: Phil Lubbers
Phone number:

Media specialist(s) name(s): Nancy Heistand

Teacher(s) name(s): Don Groff
email address:

Recommended subject area: Social Studies/Science
Grade level/audience: 5, 6

Description: Woodbine Elementary School is using the Internet to let other people know about **Iowa's Sesquicentennial**. Using email addresses, students have contacted schools in Iowa, the United States and other countries. The objective of the project is contact as many people as possible about Iowa's 150th birthday. They have sent out materials such as a brief history, calendar, booklet, and video on the Loess Hills of Iowa, a Sesquicentennial booklet, a survey sheet, a brief history of Iowa and Woodbine school, and five soil experiments to complete. Other efforts include grocery sacks and bumper stickers with the information, a spring musical, radio and TV and speaking to clubs in the community. Bulletin boards display news articles

and replies from the contacts.

Go to Higher Education Winners

1996 Showcase on Educational Technology
Award Recipients

Higher Education

School name:Des Moines Area Community College (DMACC) Boones Campus
Phone number: (515) 432-7203
Fax number: (515) 432-6311

School address: 1125 Hancock Drive, Boone, IA 50036

Contact person: Nancy Woods
Phone number: (515) 432-7203 ext. 1061

Media specialist(s) name(s):

Teacher(s) name(s): Nancy Woods
email address: nawoods@dmacc.cc.ia.us

Recommended subject area: Calculus I, II
Grade level/audience: College/univ.

Description: **Mathematica**, a math software program, is one use of technology used to develop calculus concepts in Calculus I and H classes at the Boone campus. *MATHEMATICA* is project based and students learn collaboratively. Students use email to discuss problems and assignments with each other, send assignments to the instructor, receive feedback from and communicate with the instructor. Graphing calculators, which provide a visualization of problems and videotapes, which present another viewpoint of the material enhance the learning.

School name: Des Moines Area Community College
Phone number: (515) 964-6293
Fax number: (515) 965-7135
School address: 2006 S. Ankeny Blvd., Ankeny, IA 50021

Contact person: Vivian Brandmeyer
Phone number: (515) 964-6293

Media specialist(s) name(s): Jane Smith and Mike Loos

Teacher(s) name(s): Russ Moorehead
email address: rpmoorehead@dmacc.cc.ia.us

Recommended subject area: marketing/human potential
Grade level/audience: post secondary

Description: **Integrating Multimedia in the Principles of Marketing course** is accomplished through the use of Astound presentation software which has been adapted to marketing principles, laser disc which offers superior material, and news shorts/company vignettes which highlight material. Video cases help test students' ability to apply text material to real world situations. This course is also taught on the ICN. As a "Communication Style Management" course, Human Potential explores concepts of communication enhanced by a PowerPoint presentation developed by the instructor.

School name: Des Moines Area Community College
Phone number: (515) 964-6289
Fax number: (515) 965-7135
School address: 2006 S. Ankeny Blvd. Bldg. 8, Ankeny, IA 50021

Teacher(s) name(s): Monna Knutsen
email address: mmknutsen@dmacc.cc.ia.us

Recommended subject area: Medical Terminology
Grade level/audience: high school (12)/adult

Description: This will begin the 3rd year of **Teaching Medical Terminology via the** ICN to the Ankeny, Boone, Carroll and Newton campuses with the urban campus in Spring, 1997. Via the ICN, various forms of media are used - videos, Power Point presentations, software compatible with the textbook and medical CD-Roms.

School name: Hawkeye Community College
Phone number: (319)296-2320
Fax number:
School address: 1501 E. Orange Road, Waterloo, IA 50704

Contact person: Dr. Dan Brobst
Phone number: (319)296-2320

Media specialist(s) name(s): Sharon Miller

Teacher(s) name(s): Dr. Roger J. Eich
email address: DeeVant@aol.com

Recommended subject area: sociology
Grade level/audience: college

Description: The instructor has developed a **multimedia presentation package** for the fifteen chapters of the sociology textbook used at HCC. He also developed a manual which discusses how to modify the slides for individual classroom settings. The instructor has also converted a class on "teaching tolerance" and one on social work into the multimedia environment. He is currently working on a manual to accompany a CD-ROM "Maps and Facts" which suggests ways to use the CD in the classroom. He would like to develop an interactive textbook published in the CD-ROM format.

School name: Iowa State University (ISU)
Phone number: (515)294-9871
Fax number: (515)294-3163
School address: -3010 Agronomy Hall, Ames, IA 50011

Contact person: Eugene S. Takle
Phone number: (515)294-9871

Media specialist(s) name(s)- Michael R. Taber

Teacher(s) name(s): Eugene S. Takle

email address: gstakle@iastate.edu

Recommended subject area: Internet courseware
Grade level/audience: high school or university

Description: **Use of the Web as a tool for Interactive Learning** is an Internet-based course designed with goals of scalability and asynchronous delivery while maintaining person contact. Student-centered web-interactive exercises challenge students to use and interpret current environmental data by demonstrating the interconnectedness of components of the earth systems, instilling the value of peer-reviewed literature on global change issues, and by engaging students in dialog with each other and outside experts on the economic, social, political, and ethical implications of these changes. Students access the course through a home page and can access electronically pre- and post-lecture exercises, student questions and observations, student reports, and responses to ethical issues. Remote experts can be interviewed through CU-SeeMe capability (videoconferencing through the Internet).

School name: Iowa State University (ISU)
Phone number: (515) 294 - 1064
Fax number: (515) 294 - 1337
School address: Biology, 201 Bessey Hall, Ames, IA 50011

Contact person-. Warren D. Dolphin
Phone number:

Media specialist(s) name(s): Mark Windschiti

Teacher(s) name(s): G. Brown, J. Colbert, D. Debinski, D. Emery, J. Girton, A. Meyers, J Mayfield, R. Phipps, B. Pleasants, J. Pleasants, W. Rowley, E. Wurtele, D. Voytas
email address: wdolphin@iastate.edu

Recommended subject area: Science/Biology
Grade level/audience: higher education

Description: **Project Darwin** makes extensive use of computers and networking technology to facilitate communication with and among biological science students. Faculty have been trained on computers, Power point presentation software, and Internet skills. An image bank containing 9000 scans of slides and textbook illustrations was created and put on-line allowing faculty to prepare lectures from their desktop. The presentation resides on a dedicated computer server which can then be accessed during the lecture or later for student review sessions. Students use email to communicate with instructors, advisors, and other students. Students use the as a resource for locating information, scheduling appointments, look for jobs or internships, and visit field trip sites. Simulation programs, calculation spreadsheets, graphing programs, word processing and statistics programs and Netscape software to access the WWW are some of the other ways technology has been integrated into the biological science curriculum.

School name: Iowa State University (ISU)
Phone number: (515) 294 - 0385
Fax number: (515) 294 - 2654
School address: ISU College of Veterinary Medicine, 2254 Veterinary Medicine

Contact person: Stephen R. Pendry
Phone number: (515) 294 - 0385

Media specialist(s) name(s): Stephen R. Pendry, David White

Teacher(s) name(s): Dr. Eldon K. Uhlenhopp, Dr. David F. Merklev
email address: pendry@iastate.edu /uhlen@iastate.edu

Recommended subject area: Veterinary Medicine
Grade level/audience: higher education

Description: The **Convergence of Veterinary Grand Rounds Presentations and ICN-based Distance Learning facilities** project at ISU provides an atmosphere for multimedia production and delivery as well as a mobile cart-based ICN system allowing live demonstrations from the "wet lab". The Grands Rounds Presentations have become an important professional experience enhanced by the media support and dual projection systems displaying 2 x 2 slides and presentation software side by side. The development of the mobile cart-based ICN system enables the special needs of medial and biological subject matter. Capturing the Grand Rounds Presentations on videotape and using the ICN to deliver the programs is accommodating the objectives of maintaining and enhancing the quality of live presentations to the college, delivering the presentations to potentially large audiences of practicing veterinarians, and to create a library of videotapes for use by students, faculty and external audiences.

School name: North Iowa Area Community College
Phone number: (515) 423 - 1264
Fax number: (515) 423 - 1711
School address: 500 College Drive, Mason City, IA 50401

Contact person: Mike Thede
Phone number: (515) 422 - 4257

Media specialist(s) name(s): Bruce McKee

Teacher(s) name(s): Helen Karamitros, Patty Crowe, Tom Oswald, Fred McCurnin, John Schmaltz, Steve Long, John Brietzke, Mike Thede
email address: ThedeMik@NIACC.cc.ia.us

Recommended subject area: all social sciences
Grade level/audience: college (Fr./Soph)

Description: The North Iowa Area Community College Social Science Department's Technology Initiative (**Classroom 2000**) is a department-wide undertaking integrating mobile technologies into ALL facets of teaching through the use of notebook computers, presentation software, and projection devices. This initiative will provide an environment of mobility (notebook computers) for instructors providing access to materials to develop presentations, share materials with students through projection devices, and integrate technology into classroom instruction.

School name: University of Northern Iowa (UNI)
Phone number: (319) 273 - 2309
Fax number: (319) 273 - 2917
School address: 200 CET Building, Cedar Falls, IA 50614-0301

Contact person: Doreen Hayek
Phone number: (319) 273) - 7300

Media specialist(s) name(s):

Teacher(s) name(s): Beth Kuehl,Linda Pingel , Allison Kenkel, Jennifer Wilcox, Mark Alexander
email address: Hayek@uni.edu -

Recommended subject area: Science
Grade level/audience: 6 - 12

Description: In a joint project with US West, the staff of the Iowa Educational Technology Training Institute (IETTI) at LNI developed UNTLinks, an Internet organizing service for grade 6 -12 science instructors. Over 1000 quality data sites were collected and organized into specified science sub-topics. Teachers then personalize the resulting site for specific classes or class lessons. thirty-four teachers from the Cedar Falls area were selected to pilot-test UNILinks with an introductory 3-day workshop and subsequent testing and evaluation.

School name: University of Northern Iowa (UNI)
Phone number: (319) 273 - 2202
Fax number: (319) 273) - 6457
School address: Department of Teaching - Price Lab School

Contact person: Roger Kueter
Phone number: (319) 273 - 2202

Media specialist(s) name(s):

Teacher(s) name(s): Linda F. Quinn
email address: Quinn@uni.edu

Recommended subject area: supervision - student teachers
Grade level/audience: graduate

Description: The **Mildred L. Middleton Professional Development Seminar Series** is designed to provide educators in Iowa and beyond an opportunity to increase their own professional growth through increased mastery of techniques and strategies for supporting and supervising student teachers. The series is offered on the ICN, video and the . A Professional Development site (http://www.uni.edu/profdev) has been established to provide information on the content and purpose of the seminars and create a venue for increased use of multimedia technology in the delivery of the seminars. Future plans include the development of CD-ROM discs with virtual cases demonstrating the complex dimensions of relationships between teacher and student teacher.

Back to Winners List

Summary of Showcase on Educational Technology Sharing Activities

Date	Activity	Delivery Method	Approximate Number of Sites	Approximate Number of Attendees	Number of Winners Presenting
12/17/96	Awards Presentation	ICN	15	NA	NA
1/9/97	Technology Fair	On-site		60	7
2/10/97	In-service Day	ICN	7	20	7
2/20/97	Sharing Session	ICN	40	100	3
2/26/97	A day at the Capitol	On-site		NA	14
3/27/97	Sharing Session	ICN	40	100	3
4/2/97	Sharing Session	ICN	40	100	3
4/10/97	Sharing Session	ICN	40	100	3
4/17/97	Sharing Session	ICN	40	100	3

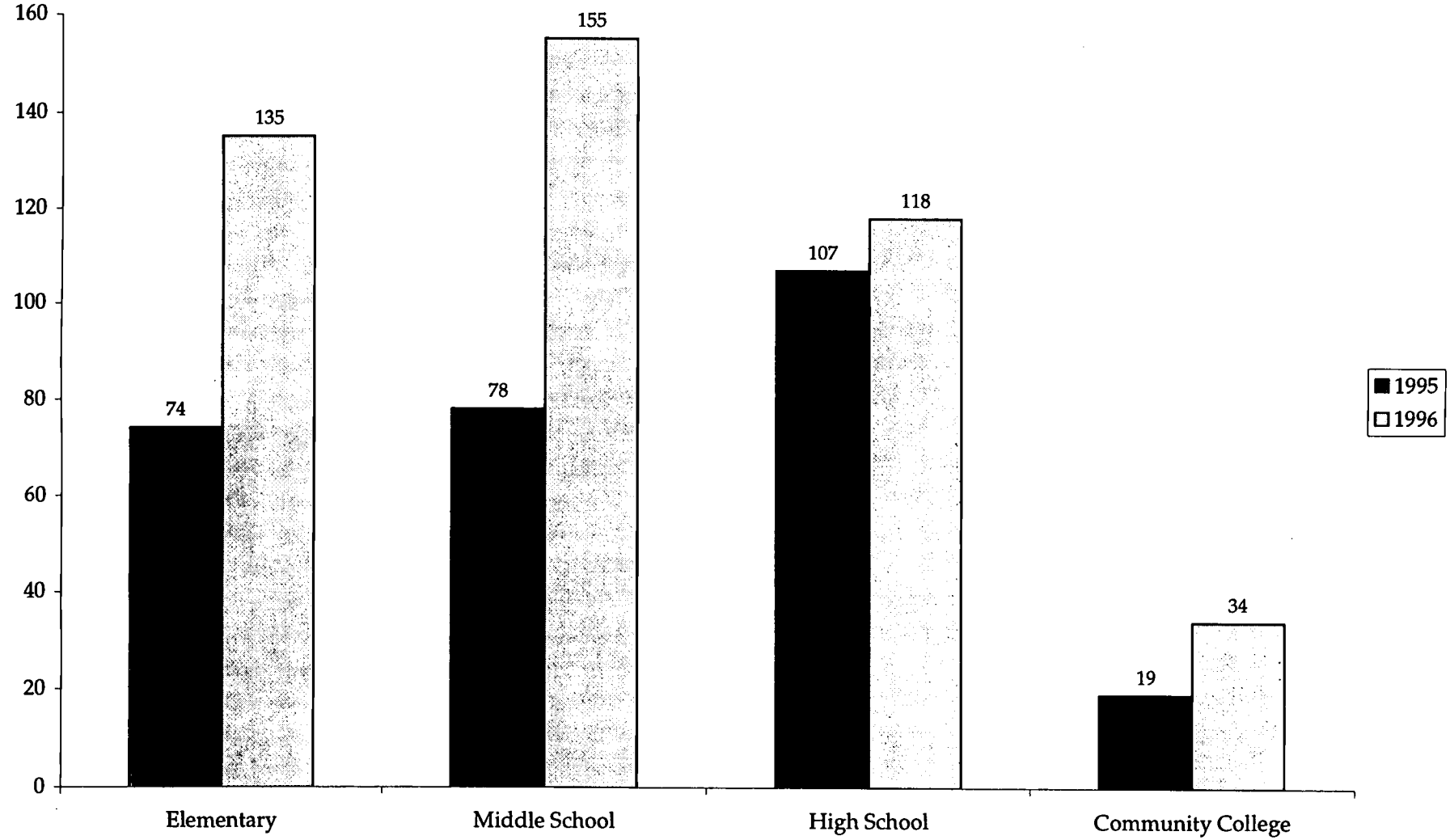
Showcase on Educational Technology: District Information

School	Chapter 1	Minority Enrollment	Limited English Proficiency (>25 students)	County Poverty Rate	Rural County	District Enrollment <600	Internet Access	ICN Classroom
Briggs Elementary School	X			15.1%-20%	2,500-19,999		X	X
Cedar Falls High School		3.6% >250 students		15.1%-20%			X	X
Forest City Middle School		>3.6% <250 students			2,500-19,999		X	X
Fort Dodge Senior High School	X	3.6% >250 students		15.1%-20%			X	X
Grundy Center High School					2,500-19,999		X	X
Kittrell Elementary School	X	3.6% >250 students	X	15.1%-20%			X	
Northwest Junior High School								
Oelwein Middle School	X			15.1%-20%	2,500-19,999		X	X
Ottumwa High School	X	>3.6% <250 students		20.1%-25%			X	X
Rockwell-Swaledale CSD						X		

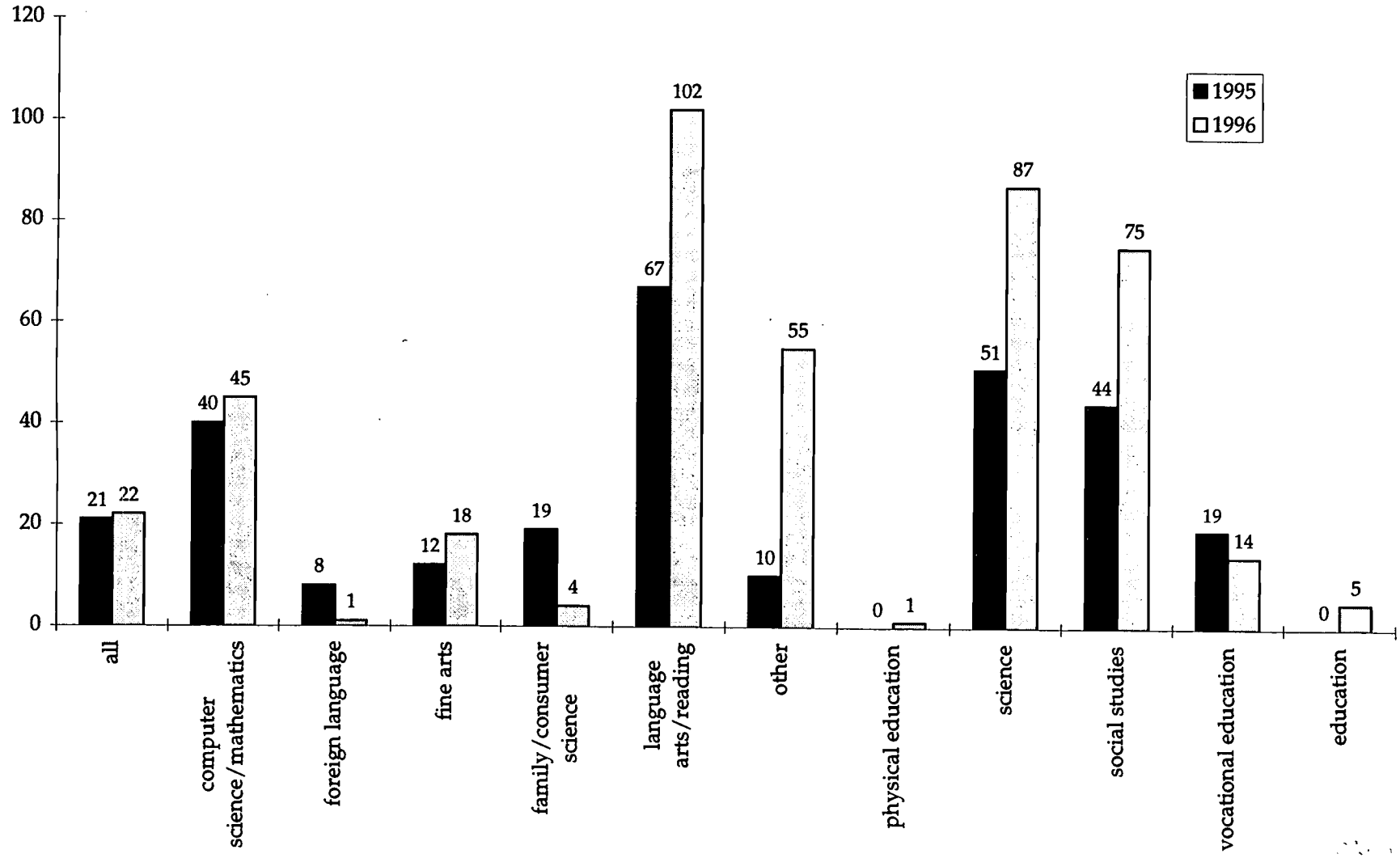
Showcase on Educational Technology: District Information *continued*

School	Chapter 1	Minority Enrollment	Limited English Proficiency (>25 students)	County Poverty Rate	Rural County	District Enrollment <600	Internet Access	ICN Classroom
Sioux Center Middle School					2,500-19,999		X	X
Table Mound School	X	3.6% >250 students	X				X	X
Washington Irving Elementary							X	X
Wilson Elementary		3.6% >250 students	X	15.1%-20%			X	X
Woodbine Elementary School	X			15.1%-20%	2,500-19,999		X	

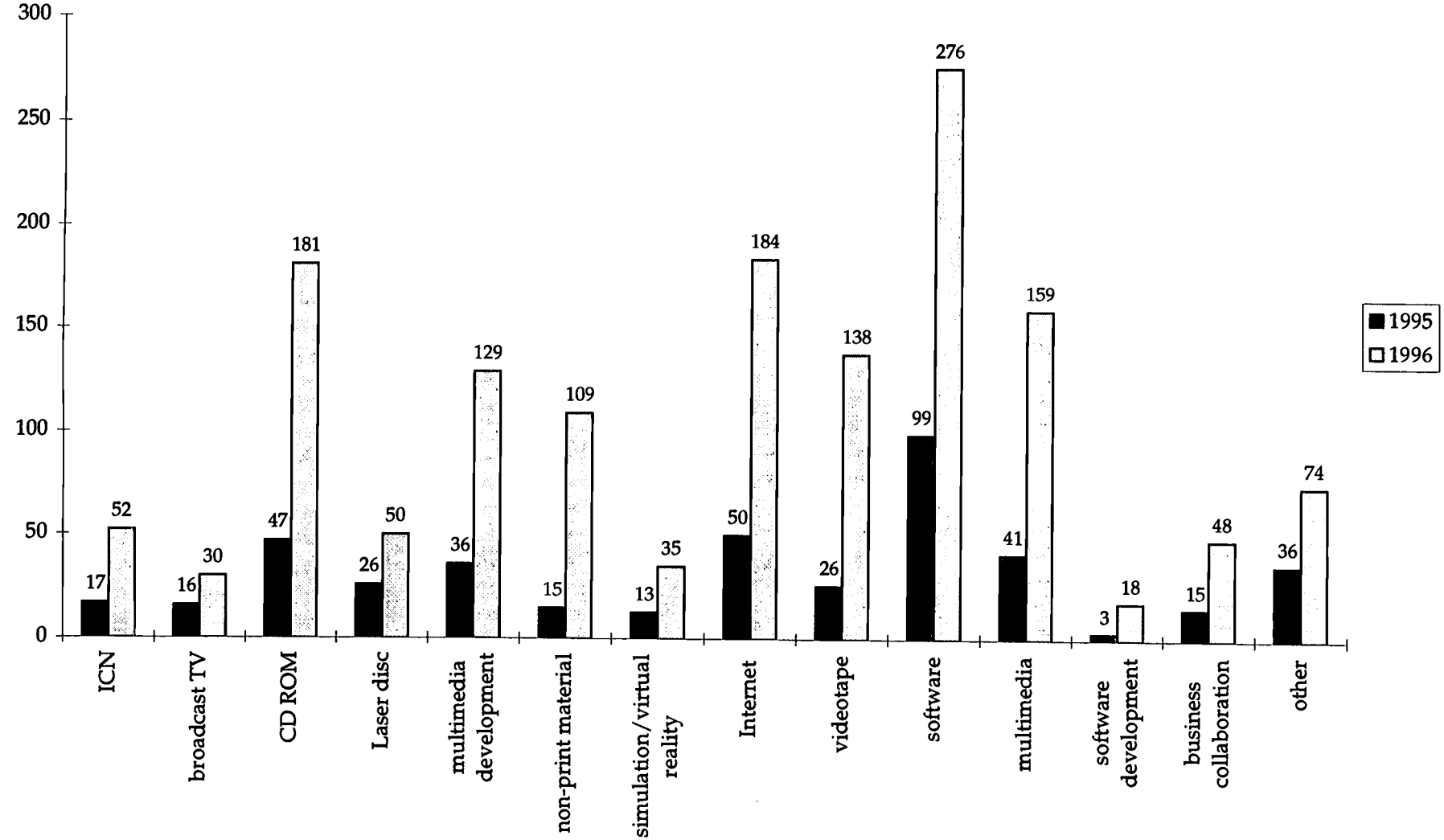
Comparison of Educational Level:1995 to 1996 Showcase on Educational Technology Submitted Projects



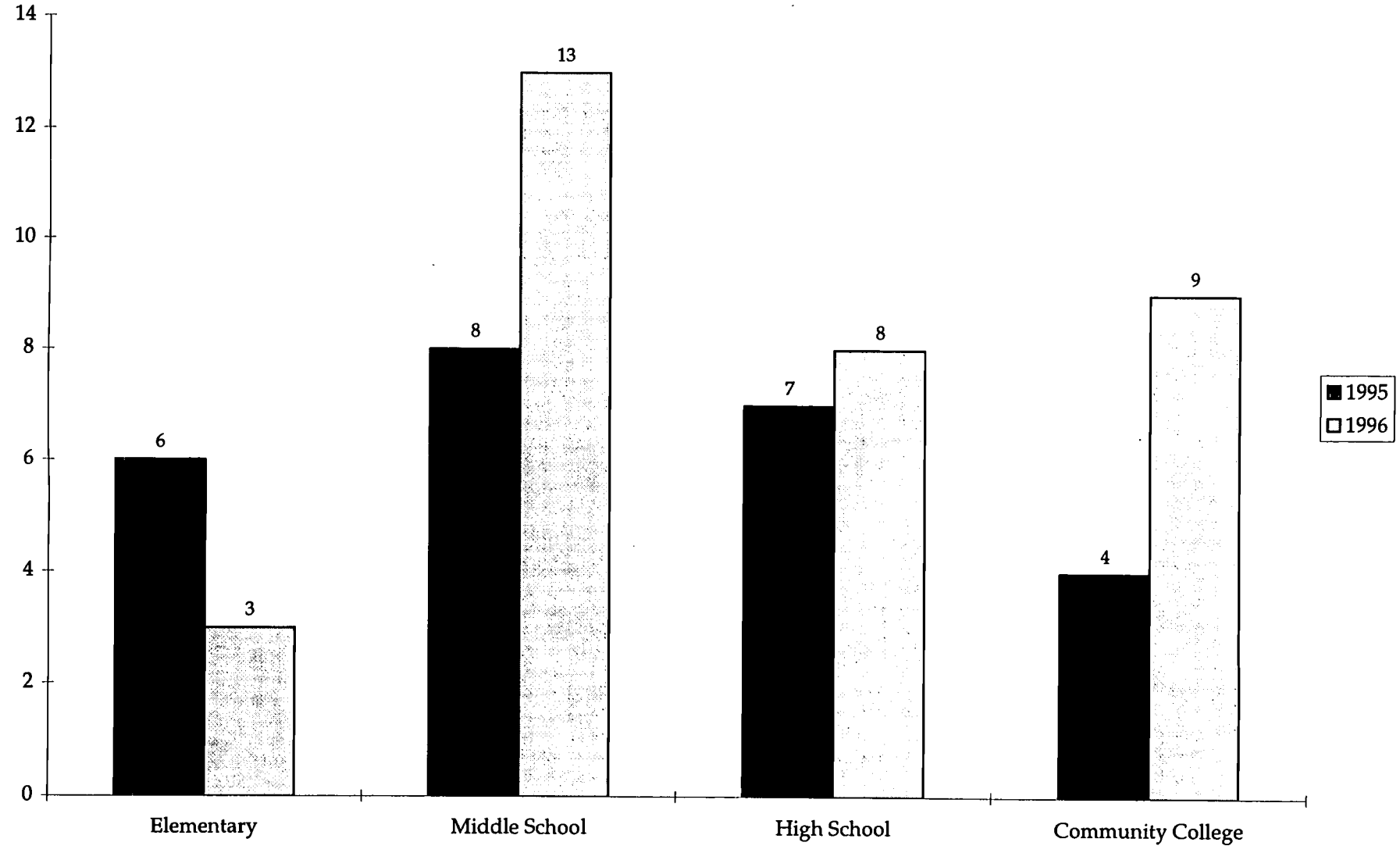
Comparison of Subject Area: 1995 to 1996 Showcase on Educational Technology Submitted Projects



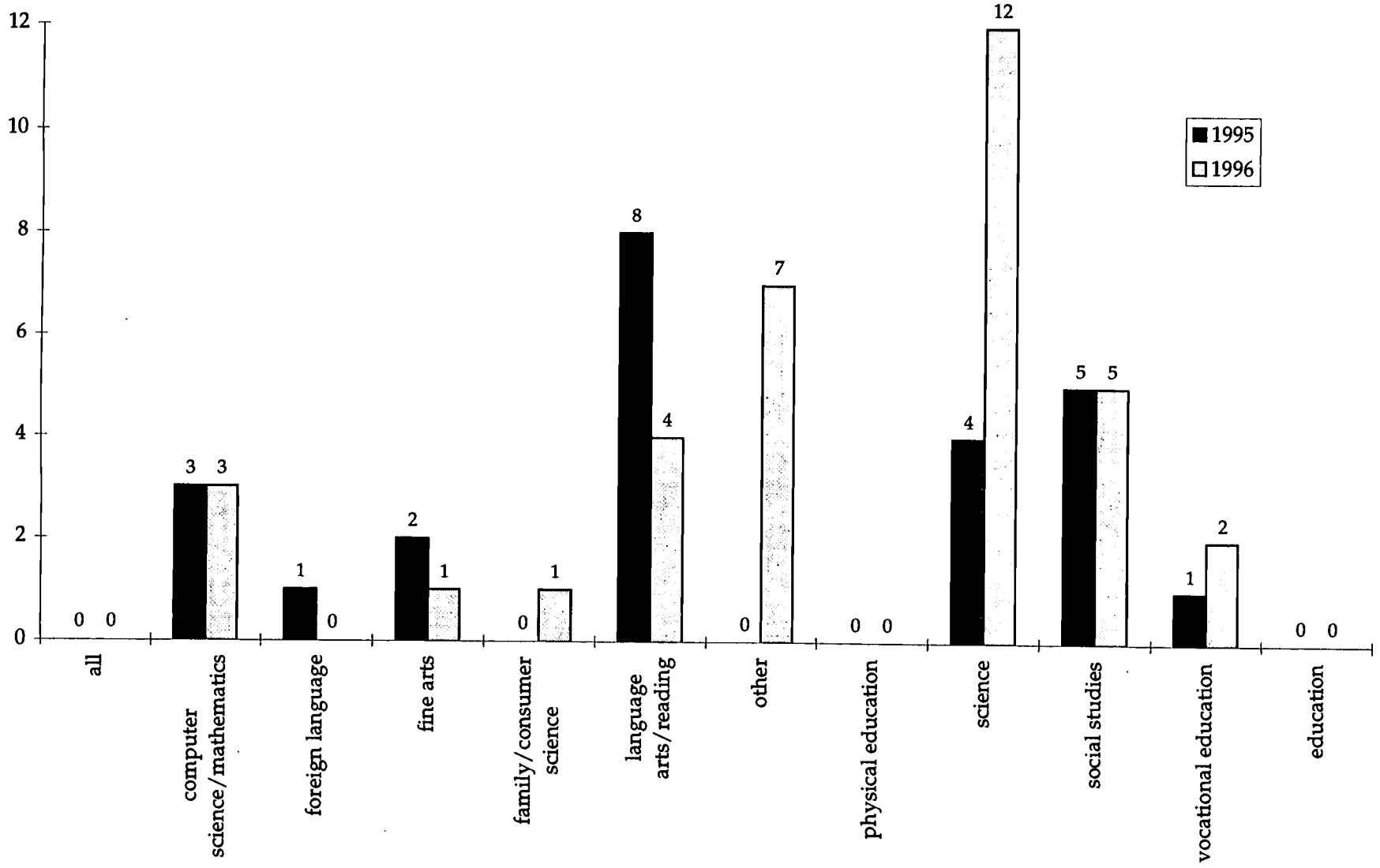
Comparison of Media Used: 1995 to 1996 Showcase on Educational Technology Submitted Projects



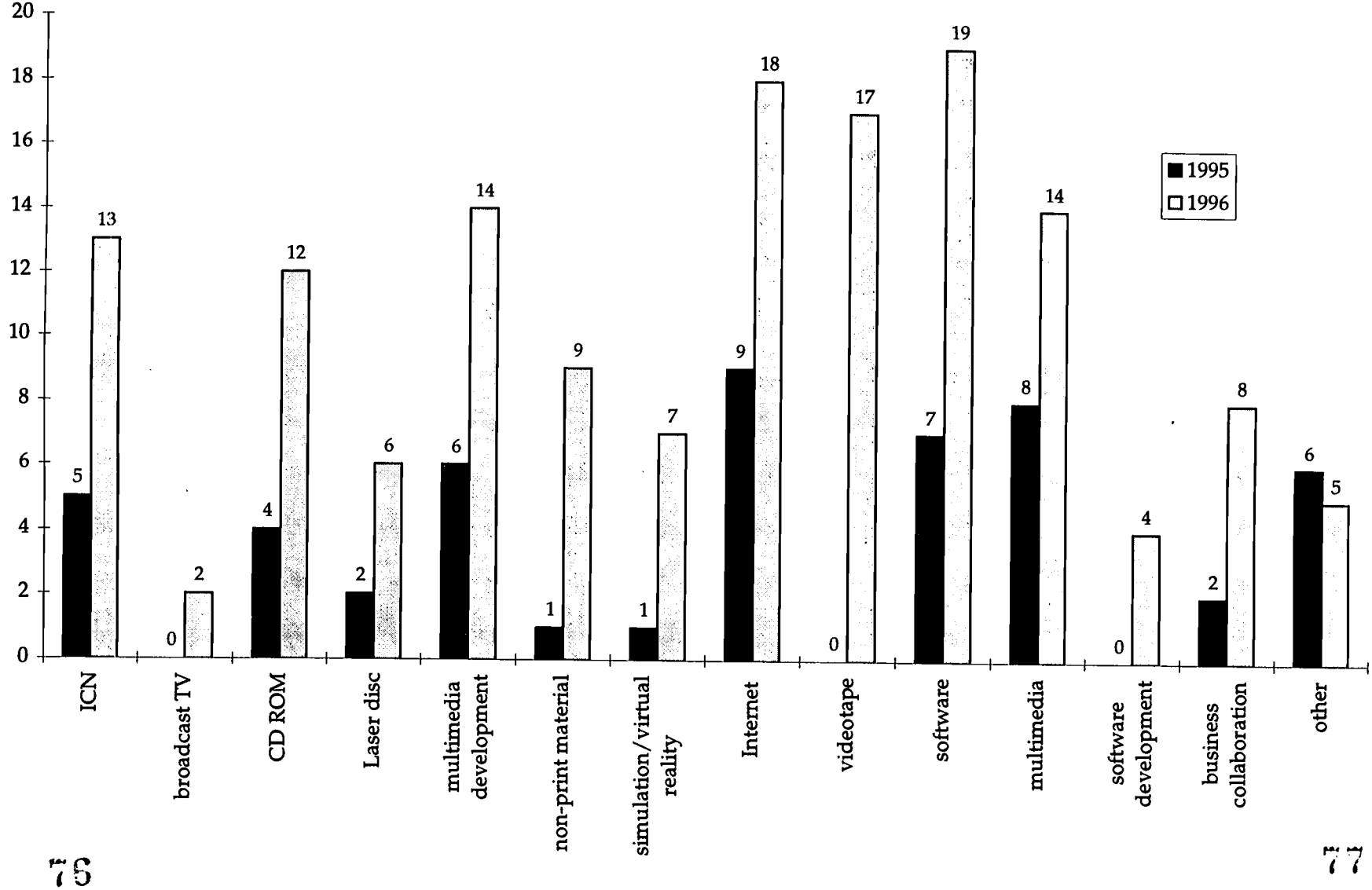
Comparison of Educational Levels: 1995 to 1996 Showcase on Educational Technology Winners

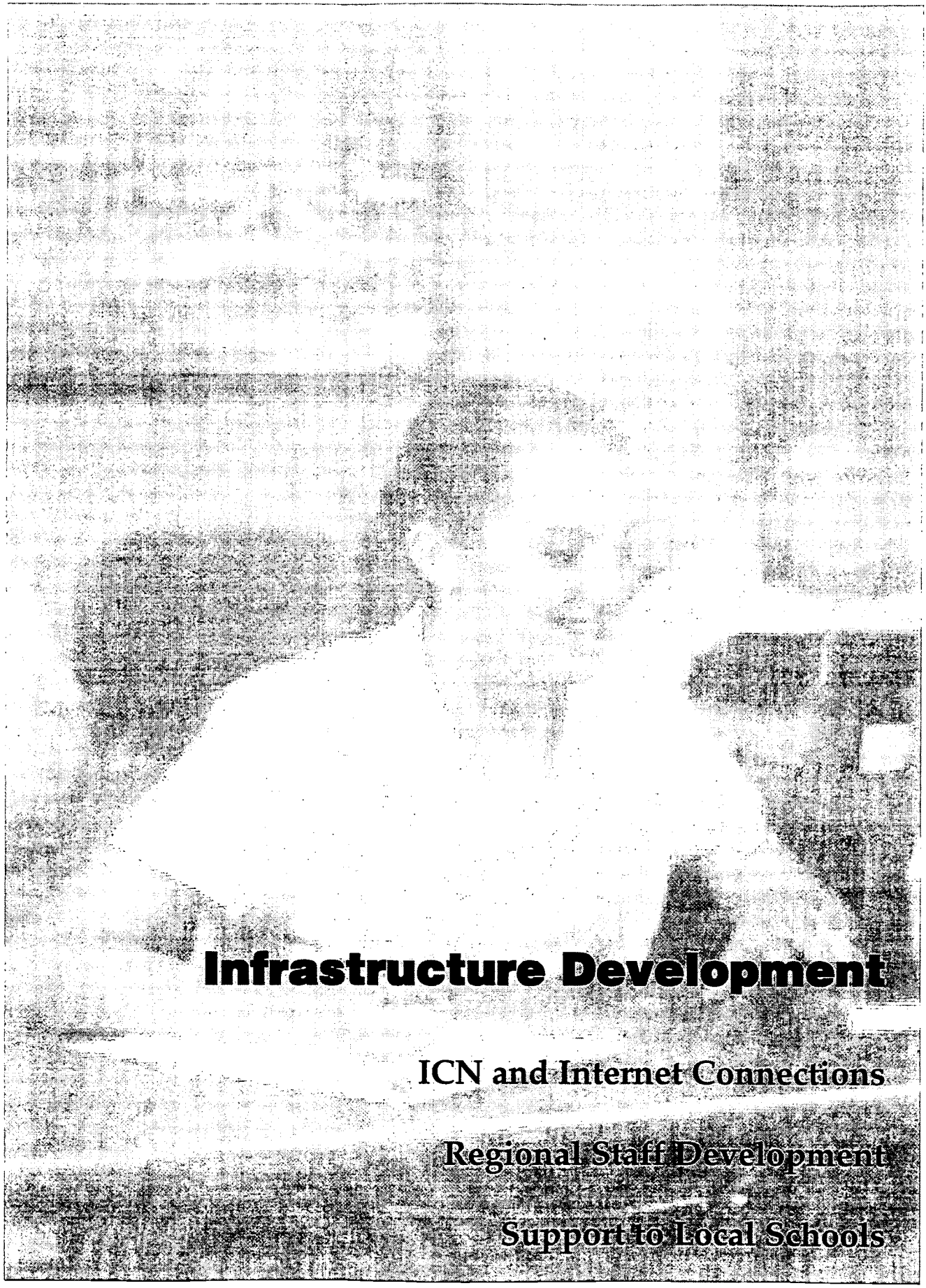


Comparison of Subject Area: 1995 to 1996 Showcase on Educational Technology Winners



Comparison of Media Used: 1995 to 1996 Showcase on Educational Technology Winners





Infrastructure Development

Goal 2: Iowa educators and students will be supported in distance learning technologies by training and access to ICN video and data resources.

Objectives related to this goal include:

1. providing selected sites with equipment including ICN basic video classroom components or enhancements and/or routers and equipment for accessing Internet via the ICN and providing block grants to schools to enhance their technology plans,
2. providing staff development opportunities for K-12 educators in the use of educational technology, and
3. providing resources to partially offset school district costs for access to Internet.

Plans were submitted by each of the 15 regions in the state outlining how they would spend regional allocations in each of these three areas. Regions opted to focus their resources in different ways, for example, some spending their allocations primarily on Internet support and others on staff development. Activities in the regions occurred in five areas: (1) purchase of video classroom equipment for schools connecting to the ICN, (2) funding to offset purchase of equipment for schools to connect to Internet or costs associated with dial-up Internet connections, (3) regional staff development activities, (4) technical support and assistance provided to schools, and (5) other.

Materials, tables and charts related to this goal may be found at the end of this section.

ICN and Internet Connections

Additional sites have been connected to the ICN and a number of schools have been connected to Internet as a result of the project. Demand continues to grow and schools are anxious to get connected.

Accountability

- An additional 49 ICN sites were scheduled to be connected during 1997 as part of the Regional Plans. Not all of these have been connected at this time.
- From a total of 100 ICN sites at the end of 1993, the number of sites has grown to 447 as of September 1997.
- Among 377 school districts, 71 were connected to Internet by June 1996. In a technology study conducted by Iowa Department of Education, 344 districts reported having Internet access at the end of 1996-97 school year.

Effectiveness

- The average number of sessions per week per semester has increased from 291 sessions in Fall 1995 to 558 sessions in Spring 1997.
- K-12 use of the ICN accounted for 23% of the total use of the system in Fall 1995. This has grown to 29% of the total use of the system in Spring 1997.
- 36 advance scheduled courses were offered over the ICN in Spring 1996 compared to 77 in Spring 1997.
- Course offerings continue to be in a variety of content areas.
- In general, project coordinators report satisfaction with the distribution of regional funds and with the effectiveness of project management, although several coordinators indicated they were unfamiliar with the project management including the Partner's Council.

Impact

- There has been an increase in the use of the ICN for offering K-12 courses. Seven K-12 courses were offered in Spring 1994; 16 in Fall 1994; 19 in Spring 1995; 32 in Fall 1995; 36 in Spring 1996; 53 in Fall 1996; and 77 in Spring, 1997.
- Regional coordinators report that the Star Schools project has motivated schools to get connected to both the ICN and the Internet. "The Star School money leverages 200% to 400% its initial investment." There was strong interest in assistance with Internet access, indicating a need for the Universal Services program.
- A pilot survey of teachers conducted in Spring 1997 produced baseline data helpful in looking at the impact of Star Schools and distance education in Iowa. 50.7% of those responding indicated that they had used an ICN classroom. Of those who had not used the ICN classroom, over 40% identified a lack of interest as the reason.
- In general, teachers reactions to the ICN and Internet were positive, though many indicated a concern about their ability to be effective in teaching in those settings.
- Just under 70% of teachers indicated they had adequate Internet access at school. 68% indicated students had adequate access to the Internet at school.

Regional Staff Development

Teachers have been supported through local staff development opportunities in the use of educational technology.

Accountability

- Eleven regions planned to provide local opportunities for staff development in the use of technology, including training on use of the ICN and Internet, training for networking support specialists, and curriculum integration. All 11 indicated these activities were accomplished.

Effectiveness

- Many regions conducted their own workshops on ICN and Internet use. No effectiveness or impact data was available.
- The training agency reported only limited information on ICN workshop participants. A total of eight interactive television workshops were conducted with a total of 91 participants.

Impact

- About half of the teachers responding to the Spring 1997 survey reported teachers in general were receiving effective training in distance education techniques, but only a third felt that they have sufficient training in distance education with almost 90% indicating they need more training in distance education.
- Over 85% felt that the administration was supportive of distance education and about three-fourths felt teachers were supportive of distance education.
- 97% of the teachers indicated an interest in learning more about how to integrate the Internet into the curriculum.

Support to Local Schools

Schools have received additional funding to support technology initiatives. Regional coordinators indicate that regional efforts have been received positively.

Accountability

- All 15 regions have distributed additional funds to local schools to help support Internet connections. Funds were provided for routers, switching devices, servers, direct connection costs, and dial-up costs.

Effectiveness

- Regional coordinators report local satisfaction with the distribution of funds and indicated that the support provided by Star Schools funds "has been a definite nudge in getting on-line with the Internet."

Impact

- "Star Schools activities are making a BIG difference, enabling our rural schools to become connected." "In most cases, the Star Schools funding is making Internet an affordable reality in our school districts. Few school districts are without at least one endpoint for Internet access."
- About half of the teachers responding to the Spring 1997 survey indicated that they felt comfortable using the Internet for class assignments.

Regional Partnerships

Table: Summary of Regional Plans
Table: Summary by Allocated Sums
Table: Summary of Regional Reports
Goal 2: Evaluation Guidelines and Forms
Regional Survey
Summary of Survey Responses
Table: Discription of Districts with ICN or Internet Access
Key to District Tables
Table: Iowa School Districts

Summary of Regional Plans 1996-97

Region	Classroom	Internet Access	Staff Development	Technical Support	Other
AEA 1		Site hardware, software, access		Network support & services	Funds for AEA WAN
AEA 2		Router, connect fees, PVC costs	ICN and Internet training	ICN classroom and Internet consultation	Travel, printing
AEA 3		Hardware and software; access grants	Grants for technology training		
AEA 4		Software and licensing	Technology Fair and Inservice Event		
AEA 5	21 sites	Wireless connection of LANs; Web filter	ICN training sessions		ICN Course development; Internet train project
AEA 6		Server, access costs	ICN and Internet training sessions		Technology learning classroom
AEA 7	21 sites	Classroom access	ICN and Internet training		
AEA 9		Access costs and Equipment upgrade	Technology training		
AEA 10		Access costs	Technology training		
AEA 11	6 sites	Access costs			
AEA 12		Access and equipment costs			
AEA 13		Access and connection costs		Consulting and maintenance costs	ICN Course development
AEA 14		Access and equipment costs	Staff development and workshops on the ICN		Technology mini-grants
AEA 15	1 site	Access costs	ICN training and curriculum integration		Technology evaluation
AEA 16		Connection costs	Internet workshops		

Summary of AEA Plans by Allocated Sums

AEA #	Total Amount	Staff Development	Internet Hardware/Software	Classroom	Mini-grants	Technical Support	Other
1	$42,898	$2,000	$11,525		$29,464		
2	$32,856	$12,037	$13,700			$6,019	$1,100
3	$27,778		$9,778		$18,000		
4	$28,215	$4,000	$24,215				
5	$161,185	$1,350	$26,750	$126,000	$1,685		$5,400
6	$29,577	$6,000	$23,577				
7	$40,095	$13,095		$15,000			$12,000
9	$50,620	$43,625	$6,995				
10	$55,699	$23,199	$32,500				
11	$121,378		$85,378	$36,000			
12	$39,238		$39,238				
13	$39,053	$5,750	$33,303				
14	$26,662	$1,000	$12,000		$13,662		
15	$33,552	$9,900	$23,553				
16	$31,142	$13,142	$18,000				

Summary of Regional Reports 1996-97

Region	Classroom	Internet Access	Staff Development	Technical Support	Other
AEA 1		Site hardware, software, access		Network support & services	Funds for AEA WAN
AEA 2		Router, connect fees, PVC costs	ICN, Internet, and software training	* *ICN and Internet consultants*	* *Travel and printing cost* s
AEA 3		Hardware and software; access grants	Internet training	Paid substitutes while others attend training	
AEA 4		Hardware and Software purchased, license fees, and access fees subsidized	Technology Fair and Inservice Event (use of Web and Technologies)	Purchased multimedia equipment and editing software	
AEA 5	* *21 sites*	* *Wireless connection of LANs; Web filter*	ICN training sessions		* *ICN Course development; Internet train project*
AEA 6	2 new sites - earlier money	Servers, access costs, license costs	ICN, Internet, and software training		Technology learning classroom
AEA 7	21 sites	Classroom access	ICN and Internet training		
AEA 9		Access costs and Equipment upgrade	Technology training		
AEA 10	14 new sites - earlier money	Access costs - subsidized	Technology use, Internet research and publishing, and software training		
AEA 11	6 sites	Access costs			
AEA 12	1 new site- earlier money	Subsidized access and equipment costs			
AEA 13		Access and connection costs		Consulting and maintenance costs	ICN Course development
AEA 14		Access and equipment costs	Internet, ICN, and software training		* *Technology mini-grants*
AEA 15	1 site	Access costs	ICN training and curriculum integration		Technology evaluation
AEA 16		Connection costs	Internet and ICN workshops		

* *Indicates a planned activity that was not reported at end of the year*

Summary of Regional Data Needed

Information related to the accomplishment of Star Schools Goal 2 is needed for overall evaluation of the project. We need your assistance in obtaining this information. Forms are provided for reporting the following information in both print and disk form. This information is needed no later than **August 15, 1997.** Please send in either print or disk form to:

TREG - Nancy Maushak
E006 Lagomarcino
Iowa State University
Ames, IA 50011

Goal 2: Iowa educators and students will be supported in distance learning technologies by training and access to ICN video and data resources.

Activity 2.1: Provide resources to K-12 and AEA sites which will connect to the ICN during the (96-97) school year.

- list of district/institution receiving funds for ICN classroom ($6000), date scheduled to go on-line
- list of district/institution receiving funds for ICN classroom equipment other than above, description of equipment

Activity 2.2: Provide staff development opportunities for K-12 educators in the use of educational technology and telecommunications for classroom applications.

- list of technology training activities provided partially or fully through Star Schools, date, number of participants, description of attendees, identified as either offered over ICN or not
- list of inservice/staff development activities provided via distance education (not necessarily funded by Star Schools), date, number of participants, description of attendees
- evaluations of above training activities

Activity 2.3: Provide resources to partially offset school district costs for access to Internet.

- list of district/institution receiving funds to offset Internet costs, description of type of assistance provided (direct connect costs, dial-up costs, equipment)

NATIONAL INDICATORS THAT HAVE IMPLICATIONS FOR REGIONAL COORDINATORS

There are 31 national indicators that are required by the US Department of Education for all statewide Star Schools Projects. Those that have implications for data collect from the regional partnerships are listed below followed by a list of data that will need to be collected to provide evidence of these indicators.

National Indicator #	Description
3	Number of sites with Internet access as a result of the project
4	Description of types of data connections provided by the project
5	Equipment/facilities/lines from existing systems connected to infrastructure
6	Characteristics of K-12 schools and other educational sites connected via video and/or data connections
12	Number, characteristics and description of technology training provided by project
13	Participants report that training was effective
17	Number and types of staff development activities provided via distance education technologies and other means
18	Number of participants in staff development opportunities
19	Participants rate staff development activities and method of delivery as satisfactory
20	Progress is reported in integrating distance education into the educational institutions of the state
22	Increased technology planing in K-12 schools and other educational institutions in evident
23	Demand for connections continues
24	Numbers and types of distance education technologies made available by the project
26	Number of educational institutions acquiring technology through Star schools resources within the last ten years
28	Number, type, and role of entities in the telecommunications partnerships

Activity 2.1

ICN Classrooms

Area Education Agency			
DISTRICT NAME: Please identify the district receiving funding.	**LOCATION OF CLASSROOM:** In which school building is the ICN equipment located?	**ON-LINE DATE:** When did the ICN classroom go on-line? (Provide dates for all classrooms that have received the $6,000 reimbursement for expenditures.)	**TECHNOLOGY ENHANCEMENTS:** Any additional equipment purchases for this location? (Please descibe the equipment)

Activity 2.2

Training Funded by Star Schools

Area Education Agency					
DISTRICT NAME: Please identify the district providing training.	**TYPE OF TRAINING:** List technology training activities provided partially or fully through Star Schools.	**DATES OFFERED:**	**HOW MANY PARTICIPANTS?**	**WHO PARTICIPATED?** Provide description of attendees.	**WAS TRAINING OFFERED OVER THE ICN?**

Activity 2.2

Other Training via ICN

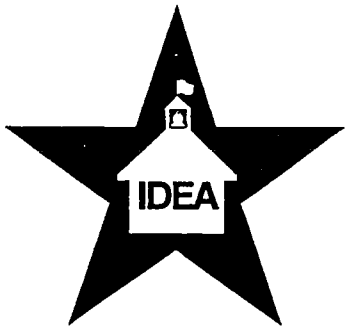
Area Education Agency				
DISTRICT NAME: Please identify the district providing training.	**TYPE OF TRAINING:** List technology training activities that were offered via the ICN but not funded through Star Schools.	**DATES OFFERED:**	**HOW MANY PARTICIPANTS?**	**WHO PARTICIPATED?** Provide description of attendees.

Technology Research and Evaluation Group
Iowa State University
(515) 294-6919

Activity 2.3
Internet Access

Area Education Agency	
DISTRICT NAME: Please identify the district receiving resources to help offset Internet access costs.	**TYPE OF ASSISTANCE:** What kind of assistance was provided by Star Schools (direct connect costs, dial-up costs, equipment, etc.)?

Technology Research and Evaluation Group
Iowa State University
(515) 294-6919



Open-ended Response Questions

Please take a few minutes to respond to the following questions related to Star Schools Activities in your region. We encourage you to share this survey with others at your AEA. You could have each individual report on a separate survey or work collaboratively to complete one survey to represent your AEA.

1. Describe how you think project activities are going in your region.

2. What differences do you think the Star Schools activities in your region are making in K-12 schools?

3. How satisfied are you with the leadership provided by Project Management and the Partners Council?

4. How satisfied are you with the distribution of funds to your region?

5. Describe how this project has affected collaboration among educational institutions in you region. Please provide specific examples if possible.

6. What concerns do you have related to the Star Schools Project?

7. What impact will the possible ending of Star Schools funding in 1998 have in your region?

Summary of Regional Survey Open-ended Responses

1. Describe how you think project activities are going in your region.

Very well

Activities are going as well as can be expected. Some, of course, such as use of Electric Library and staff development training on the equipment listed, will only come into fruition during the FY1998 year.

No interest at all in activity 2.2. There was a great deal of interest expressed in activity 2.3 partially offsetting Internet costs. We had 10 schools express an interest in the wireless partial funding opportunity and 6 districts that will be installing a wire less WAN solution between distant buildings.

We have had good response and participation for both individualized training and participation type projects as well as for regional type collaborative projects. We have provided a nice blend/mix.

I fell high schools and educators/staff in those buildings are making progress toward the integration of distance learning into their curricula. With the exceptions of a few districts who have exceptional staff development plans related directly to technology, few elementary and middle school teachers are using telecommunications in their teaching.

All projects seem to be going well. Most of the activities are coordinated by specific individuals and it may be beneficial to step back and look at the big picture next year. It may be useful to have an organizational structure look at coordinating events. It seems that staff are not coordinating events as much as they could.

Very well. The Star Schools funds have allowed us to extend our pilot project for connecting schools to the Internet for a second year. This has provided the necessary time to generate awareness, training, policies and curriculum development.

They are progressing at a good pace. The districts are very appreciative and using the money well.

Project activities have been successfully completed. Workshops and training are progressing to the school level.

2. What differences do you think the Star Schools activities in your region are making in K-12 schools?

It is making it easier to install ICN classrooms and helps to use them more effectively.

For many schools, support provided by Star Schools funds has been a definite "nudge" in getting on-line with the Internet.

We have used a portion of each grant as seed money to support LAN and WAN buildout. Typically, schools will provide two to four times as much money toward the project as the grant. So the Star School money leverages 200% to 400% it initial investment. Once the pioneer

schools build out and were demonstration sites for other schools, those initial funds really leveraged ten to twenty times the initial amounts.

Certainly we have a cadre of teachers who are aware and literate about the ICN about the Internet and about how to begin to put this tool to appropriate use. The seed money has been great.

In most cases, the Star Schools funding is making Internet an affordable reality in our schools districts. Few school districts are without at least one endpoint for Internet access.

Star Schools has helped fund many projects and collaboration is at an all time high. More schools are using Internet because Star Schools has helped fund Internet connections.

I believe that the availability of Star Schools dollars has helped schools districts implement classrooms connected to the ICN. Many would not have connected at all and most would have delayed their connections if it were not for Star Schools incentives.

I think it is accelerating the growth of Internet users and group labs for instruction.

Star Schools activities are making a BIG difference, enabling our rural schools to become connected.

3. How satisfied are you with the leadership provided by Project Management and the Partners Council?

I am new to the position and Iowa so must admit I am not aware of the role or who project management or Partner's Council is.

It's seemed to work OK.

Now that we have the initial wrinkles ironed out, it's gone well.

The partners council is unknown to most. Not aware of its makeup or responsibilities. Project management is exemplary. Very caring and meticulous. Though not always understood by the end user.

The flexibility built into the funding formulas helps greatly. Regions are able to prioritize needs and address them with the funding.

Any contact with Partners Council has been positive.

Moderately satisfied. It is a big job and adequate communication is always difficult.

We are quite satisfied. They are responsive to questions and needs.

Very. Appreciate the input into each new funding year.

4. How satisfied are you with the distribution of funds to your region?

Very satisfied.

I have been pleased with the distribution formula.

Now that we have the initial wrinkles ironed out, it's gone well.

Formulas are fair. and are a definite help as each region gets built out.

We opted for a split between needs, AEA equipment and non-competitive grants for every school district. I feel this was a good decision and the districts appreciated the opportunity to access the funds in this manner.

If RTC funds are coming from Star Schools, it may be an improvement to have part of the funding based on student population.

Very satisfied.

Although we certainly could put more to good use, it seems to be an equitable arrangement.

Very. having the ability to combine this funding with RTC funding has greatly enabled us to make a difference directly impacting the classrooms in the region.

5. Describe how this project has affected collaboration among educational institutions in your region. Please provide specific examples if possible.

Schools in our region have gone on virtual field trips thanks to an enthusiastic teacher who by the way has to go to another school to use the ICN because theirs is not in yet. Many collaborate with classes, use for meetings.

We collaborate pretty well anyway, but I am sure tar schools has at least provided another opportunity.

The wireless project has allowed the AEA and LEA to collaborate along with vendors region wide. These contacts have been numerous.

Collaborative efforts abound in setting up regional or statewide single events for ICN, also has precipitated in area collaboration on planning for distance learning classes.

Local school districts shared the generalities of their plans at a variety of technology focused training and regional meetings. The RTC was kept informed about district choices for spending of the non-competitive grants.

This project has brought together people who have never collaborated before. These relationships could continue to grow. The AEA has worked with other groups more than before partially due to the coordination of events made possible through Star Schools money.

Some sharing of learning activities and credit classes have occurred but we need to expand on this. Training activities have been much more widely shared because of the ICN and Star Schools support.

I don't know that it has affected the collaboration. However, they were a relatively well knit group prior to Star Schools.

It has pulled our schools, the community college, public libraries and private college together, supporting one another.

6. What concerns do you have related to the Star Schools Project?

That it is ending.

If possible, materials should be sent out earlier in the fiscal year.

One shot deals are very difficult to program for. Fortunately for Iowa this has not been the case. But the soft money fears still took their toll. Iowa has been blessed with some very fine people still remaining in distance learning because of Star Schools money. The AEA has tried to act as though the money would continue and from the start develop a long range plan for implementing telecommunications. This fund has been very helpful in this activity.

Too much emphasis on other than K-12. Emphasis on distance learning (video side) as opposed to data side which is what K-12 will use the most.

We need some pilot schools and projects in the corners of the state. We also need to work on dispersing the innovations which are being created thorough Star Schools related work.

A great deal of money in the state has been spent on inservice delivery and it would be helpful if Star Schools could look at more cost effective delivery methods. Money spent on the development of materials (e.g. quality "how to" videos on a variety of topics that are now delivered via inservice such as "presenting the ICN", "Using digital photography in the classroom", and "Intro to the Internet") could have a wide impact and be cost effective.

Concern that when the funding ends the projects and training must be continued with other sources of funding.

No concerns but I would like to see more projects that would impact teachers at the grass roots level.

7. What impact will the possible ending of Star Schools funding in 1998 have in your region?

"If you fund it will get done." I am looking at the budget for the 1998-99 school year. All our rooms will be in so that is not an issue;. We will struggle to provide leadership by staffing this position. It will result in a decrease of serious staff development to schools.

It would slow down acquisition of on-line resources especially opportunities to try thing out for a year for evaluation.

Star Schools has continued to be a catalyst for telecommunications in our region. It was never a lot of money, but that isn't the role of a chemical catalyst, however it did seem to be enough. It all would have eventually come, but not as fast or as focused. We will lose that initiative.

It provided a more focused state-wide effort, not only in a financial sense, but also in organizational and personal commitment sense. These won't disappear, but the enhancement provided will be gone.

Star Schools was the initial means for interactive television staff development in the state. State funding is wavering in this regard. Its loss will slow the growth of trained teacher usage.

Less opportunity to provide pilot projects and activities and to facilitate the setting up of advanced services and workshops. We need to move on into the media production stage at teacher and student level.

More two-way video classrooms will receive equipment/access/staff development grants. It is my hope that more Internet endpoints will be encouraged and developed in K-8 settings.

There are two areas that will be significantly impacted: reduction in inservices and increase in Internet costs to schools. If Star Schools funding ends, the quantity and quality of inservices will suffer. In addition, schools would have to add more Internet costs to their budgets.

With the advent of the RTC and universal services fund I don't think it will be traumatic. The schools have used their money wisely and progressed well toward their goals. I think much of the Star Schools will outlive the project.

Will greatly slow the connectivity of schools to the Internet. We hope to see funding continue. We have approx. 75% of our districts connected so far. With a goal to make 100% in order to really impact all students.

Description of Iowa School Districts with ICN or Internet Access 1996-97

		1996 ICN Access		1997 ICN Access		1996 Internet Access		1996 Internet Access	
	Total # of IA districts	# of districts	% of total	# of districts	% of total	# of districts	% of total	# of districts	% of total
Chapter One concentration sites	160	52	32.5%	73	45.6%	25	15.6%	145	90.3%
>33% of students qualify for free/reduced lunch	95	25	26.3%	33	34.7%	13	13.6%	83	87.4%
25-33% of students qualify for free/reduced lunch	107	43	40.1%	62	57.9%	17	15.9%	92	86.0%
Concentrations of minority students	67	42	62.7%	40	59.7%	21	31.3%	64	95.5%
Concentrations of limited English proficient students	26	20	76.9%	17	65.3%	5	19.2%	25	96.1%
County poverty rate >20%	45	17	37.8%	16	35.6%	10	22.2%	40	88.9%
District enrollments <600 students	163	15	9.2%	40	24.5%	16	9.8%	136	83.4%
Total	**377**	**129**	**34.2%**	**176**	**46.7%**	**71**	**18.8%**	**344**	**91.2%**

KEY TO DISTRICT TABLES

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

(1) Minority Enrollment:

M1=>3.6% (state average) and more than 250 students
M2=>3.6% but fewer than 250 students

(2) Percent (of students) Eligible for Free and Reduced Lunch:

L1=>50%
L2=33.1% - 50%
L3=25% - 33%

(3) County Poverty Rate (percentage of 17-year-olds and younger living in poverty):

P1=>25%
P2=20.1% - 25%
P3=15.1% - 20%

(4) Rural County:

R1=population <2,500
R2=population 2,500-19,999

(5) Curriculum or Exemplary Project Site:

M=participating in project to develop multimedia instructional materials
P=submitted an exemplary technology for classroom use application
S=exemplary technology for classroom use showcase winner

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#1 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Allamakee				L3		R2		1993	X	P
Central				L2	P3	R1			X	
Decorah						R2			X	
Dubuque	X	M1	X	L3				1996 2	X	S,P,M
Eastern Allamakee				L2		R2	X		X	
Edgewood-Colesburg					P3	R2			X	
Fredericksburg						R2	X		X	
Garnavillo				L3	P3	R1	X	1996	X	
Guttenburg				L3	P3	R1		1996	X	
Howard-Winneshiek				L3		R2		1993	X	
Maquoketa Valley					P3	R2			X	
M-F-L Mar Mac				L3	P3	R1			X	
New Hampton				L3		R2		1993	X	P
North Fayette	X			L3	P3	R2			X	
North Winneshiek				L2		R2	X		X	P
Oelwein	X			L3	P3	R2		1993	X	S
Postville	X					R2			X	
Riceville				L3		R2	X		X	P
South Winneshiek						R2			X	
Starmont	X			L3	P3	R1			X	
Turkey Valley	X				P3	R2	X		X	P
Valley	X			L2	P3	R2	X		X	
West Central	X			L2	P3	R2	X		X	
West Delaware County	X				P3	R2		1993	X	P
Western Dubuque	X							1996	X	M

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#2 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Belmond-Klemme						R2		1997	X	
Cal		M2	X			R2	X	1996	X	
Charles City	X			L2	P3	R2		1996	X	M, P
Clear Lake		M2							X	M
Corwith-Wesley				L2		R2	X	1996		
Forest City		M2				R2		1993	X	S, P
Garner-Hayfield						R2		1993	X	
Greene	X					R1	X	1996	X	
Hampton-Dumont		M2	X	L3		R2		1993	X	
Lake Mills						R2		1996	X	M
Mason City		M1		L3				1996	X	P
Meservey-Thorton				L2			X			
Nora Springs-Rock Falls	X				P3	R2	X		X	
North Central				L2		R1		1996	X	
North Iowa				L2		R2		1996		
Northwood-Kensett				L3		R1		1993		
Osage	X			L3		R2		1993	X	
Rockwell-Swaledale							X			S
Rudd-Rockford-Marble Rock	X			L3	P3	R2		1996	X	
Sheffield-Chapin				L3		R2	X	1996		
St. Ansgar						R2		1996	X	M
Ventura							X	1997	X	
West Hancock				L3		R2		1996	X	
Woden-Crystal Lake				L3		R2	X	1996	X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#3 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Algona				L3		R2			X	P
Armstrong-Ringsted	X			L3	P3	R2	X		X	
Burt				L2		R2	X		X	
Clay Central/Everly				L2		R2			X	
Emmetsburg	X			L3	P2	R2		1996	X	P
Estherville Lincoln Central	X	M2		L2	P3	R2		1996	X	
Graettinger	X			L2	P2	R2	X		X	
Harris-Lake Park	X			L3		R2	X	1996	X	P
Lu Verne				L1		R2	X		X	
North Kossuth				L3		R2	X			
Okoboji						R2		1996	X	P
Ruthven-Ayrshire	X			L2	P2	R2	X		X	
Sentral	X			L3		R2	X		X	
South Clay				L3		R2	X		X	
Spencer						R2		1996	X	
Spirit Lake						R2		1993	X	
Terril	X			L3		R2	X		X	P
Titonka Consolidated						R2	X		X	P
West Bend-Mallard	X			L3	P2	R2	X		X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#4 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Boyden-Hull						R2	X	1995	X	
Central Lyon	X				P3	R2		1993	X	P
George	X				P3	R2	X	1997	X	
Hartley-Melvin-Sanborn	X			L3	P3	R2			X	
Little Rock	X			L2	P3	R2	X		X	
Marcus-Meriden-Cleghorn						R2			X	
Moc-Floyd Valley						R2		1996	X	
Rock Valley				L2		R2	X		X	
Sheldon	X	M2			P3	R2			X	P
Sibley-Ocheyedan	X					R2		1993	X	
Sioux Center						R2		1996	X	S
South O'Brien				L3	P3	R2			X	
West Lyon	X				P3	R2			X	
West Sioux				L2		R2		1996	X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#5 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Albert City-Truesdale				L3		R2	X		X	
Alta		M2		L3		R2			X	
Clarion-Goldfield		M2				R2			X	P
Dows		M2		L2		R2	X		X	
Eagle Grove	X			L3		R2			X	
East Greene	X			L2	P3	R2	X		X	
Fort Dodge	X	M1		L3	P3			1996	X	S
Gilmore City-Bradgate	X			L2		R2	X		X	
Humboldt						R2		1993	X	
Jefferson-Scranton	X			L3	P3	R2		1993	X	
Laurens-Marathon				L3		R1	X		X	
Manson-Northwest Webster	X					R1		1996	X	
Newell-Fonda		M2		L1		R2	X		X	
Northeast Hamilton				L2		R2	X		X	
Odebolt-Arthur	X			L2	P3	R2	X		X	P
Paton-Churdan	X			L3	P3	R2	X		X	
Pocahontas Area	X			L3		R1		1993	X	
Pomeroy-Palmer				L2		R1	X		X	
Prairie Valley	X			L3	P3				X	
Rockwell City-Lytton				L3		R1		1993	X	P
Sac				L3	P3	R2	X	1993	X	
Schaller-Crestland				L2	P3	R2			X	
Sioux Central				L2		R2			X	
South Hamilton		M2				R2			X	
Southeast Webster	X			L2	P3		X		X	
Southern Cal						R1			X	P
Storm Lake		M1	X	L2		R2			X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#5 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Stratford	X			L3		R2	X		X	
Twin Rivers				L2		R2	X		X	
Wall Lake View Auburn	X			L2	P3	R2	X		X	
Webster City	X			L3		R2		1996	X	M, P

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#6 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Ackley-Geneva		M2	X	L3		R2	X	1996	X	M
Alden		M2		L2		R2	X	1996	X	M, P
BCLUW						R2		1996	X	M
Brooklyn-Guernsey-Malcolm						R2		1996 2	X	M
East Marshall								1996	X	M
Eldora-New Providence				L3		R2		1996	X	M
Gladbrook						R2	X	1996	X	M
GMG						R2	X	1996	X	M
Grinnell-Newburg		M2				R2		1993	X	M
Hubbard-Radcliffe				L3		R2		1996	X	M
Iowa Falls						R2		1996	X	M
Marshalltown		M1	X	L3				1996	X	M, P
Montezuma						R2	X	1996	X	M
South Tama County		M1	X	L3		R2		1993	X	M, P
Wellsburg-Steamboat Rock				L3		R2	X	1996	X	M
West Marshall								1996	X	M

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#7 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Allison-Bristow						R1	X	1993		
Aplington				L3		R1	X		X	
Cedar Falls		M1			P3			1996	X	S, P
Clarksville						R1	X		X	
Denver									X	
Dike - New Hartford	X			L3		R2			X	
Dunkerton	X			L3	P3		X		X	
East Buchanan	X				P2	R2		1996	X	
Grundy Center						R2		1993	X	S, P
Hudson					P3				X	
Independence	X				P2	R2		1993	X	
Janesville Consolidated							X		X	
Jesup	X		X		P2	R2			X	
Nashua Plainfield	X			L3		R2			X	
North Tama County						R2			X	
Parkersburg						R1	X		X	
Reinbeck						R2	X	1996	X	
Sumner	X								X	
Tripoli	X			L3			X		X	
Union	X				P3			1996		
Wapsie Valley	X		X						X	
Waterloo	X	M1	X	L2	P3				X	S
Waverly-Shell Rock								1993	X	S

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#9 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Andrew	X				P3	R2	X		X	
Bellevue	X			L3	P3	R2		1997	X	
Bennett						R2	X		X	
Bettendorf		M1			P3			1996	X	P
Calamus/Wheatland							X	1996	X	
Camanche									X	
Central Clinton									X	P
Clinton		M1		L3				1996	X	
Columbus		M1	X	L2		R1			X	P
Davenport		M1	X	L2	P3			1996	X	S, P
Delwood				L3			X		X	
Durant						R2			X	
East Central	X				P3	R2	X		X	P
Louisa-Muscatine		M2				R1			X	
Maquoketa	X			L3	P3	R2		1993	X	S, P
Muscatine		M1	X	L3				1996	X	P
North Scott					P3			1996	X	
Northeast									X	
Pleasant Valley		M2			P3				X	
Preston	X				P3	R2	X		X	P
West Liberty		M1	X	L3					X	
Wilton									X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#10 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Alburnett								1996	X	P
Anamosa						R2		1997	X	
Belle Plaine						R2			X	
Benton						R2		1996	X	P
Cedar Rapids		M1	X	L3				1996	X	M, P
Center Point-Urbana									X	
Central City							X		X	
Clear Creek-Amana									X	
College		M2						1996	X	M
Deep River-Millersburg		M2		L2		R1	X	1996		
English Valleys	X					R1	X		X	
H-L-V						R1	X	1995 - 1, 1996 - 2	X	M, P
Highland						R2			X	
IA Braille & Sight School										
Iowa City		M1	X					1996	X	P, S
IA Mennonite										
Iowa Valley						R1			X	P
Linn-Mar		M2						1996	X	M, P
Lisbon									X	
Lone Tree		M2					X		X	
Marion Independent								1996	X	M, P
Mid-Prairie						R2			X	
Midland	X			L2		R2			X	
Monticello						R2			X	
Mount Vernon								1996	X	
North Cedar									X	
North Linn										
Olin Consolidated	X			L2		R2	X	1996	X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#10 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Solon									X	
Springville							X		X	
Tipton						R2			X	P
Vinton-Shellsburg	X			L3		R2		1996	X	
Washington		M2	X			R2			X	
West Branch						R2			X	
Williamsburg						R1				

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#11 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Adair-Casey	X			L2		R1	X	1996	X	
Adel-DeSoto-Minburn								1993	X	M
Ames		M1	X					1993	X	M, M, P
Ankeny								1996	X	M, P
Audubon	X				P3	R2		1993	X	
Ballard									X	M, P
Baxter				L3		R1	X	1996		
Bondurant-Farrar									X	M
Boone						R2			X	
Carlisle									X	M
Carroll				L3		R2		1996	X	
Colfax-Mingo						R2		1996	X	
Collins-Maxwell							X		X	M
Colo-Nesco									X	M
Coon Rapids-Bayard	X			L2		R2	X	1996	X	
Correctional Facility		M2								
Dallas Center-Grimes									X	M, P
Des Moines Independent		M1	X	L2				1996 - 5 1997-3	X	M, M, P
Dexfield				L2			X			
Earlham					P3	R2	X	1996		M
Exira	X	M2		L2	P3	R2	X		X	
Gilbert		M2							X	P
Glidden-Ralston	X					R2	X		X	
Grand				L1		R2	X			P
Guthrie Center				L2		R1	X	1993	X	
Indianola								1993	X	M
Interstate 35	X				P3	R2		1996	X	M
Johnston		M2						1995	X	M, P

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#11 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Knoxville						R2		1996	X	M
Lynnville-Sully						R2	X		X	P
Madrid						R2	X			P
Manning	X			L3		R2	X	1996	X	
Martensdale-St.Marys							X	1996	X	
Melcher-Dallas				L3		R2	X	1996	X	M
Nevada		M2						1996	X	M
Newton						R2			X	P
North Polk								1996	X	M
Norwalk								1996	X	M, P
Ogden						R2			X	
Panorama	X			L3		R1			X	
PCM						R2			X	M
Pella		M2	X			R2			X	M, P
Perry	X	M2	X	L2				1996	X	M, M, P
Pleasantville						R2		1996	X	M, P
Roland-Story									X	
Saydel Consolidated		M2		L3				1997	X	M
Southeast Polk								1996	X	M
Southeast Warren	X								X	M
Stuart-Menlo	X					R1		1996		M
Twin Cedars						R2	X		X	
United						R2	X			P
Urbandale		M2	X					1996	X	M, P

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#11 Iowa School District	Chapter 1 Concen-tration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enroll-ment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Van Meter		M2					X		X	M
Waukee									X	M, P
West Des Moines		M1	X					1995/1996	X	M, M
Winterset	X				P3	R2		1993	X	M
Woodward-Granger										M

93

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#12 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Akron Westfield				L3		R2			X	
Anthon-Oto	X			L2	P3		X		X	
Ar-We-Va	X			L3	P2	R2	X		X	
Aurelia						R2	X		X	
Battle Creek-Ida Grove	X			L2		R1		1995	X	
Charter Oak-Ute	X			L2	P2	R2	X		X	
Cherokee						R2		1993	X	
Denison	X	M2		L2	P2	R2		1996	X	
East Monona	X			L2	P2	R2	X		X	
Galva-Holstein						R1			X	
Hinton						R2			X	
Kingsley-Pierson	X			L3		R2	X		X	
Lawton-Bronson					P3				X	
Le Mars						R2		1993	X	
Maple Valley	X			L3	P2	R2		1993	X	
Remsen-Union						R2	X		X	
River Valley	X	M2		L2	P3	R2				
Schleswig	X			L3	P2	R2	X			
Sergeant Bluff-Luton		M2			P3				X	P
Sioux City	X	M1	X	L2	P3			1996	X	P
West Monona	X			L3	P2	R2			X	
Westwood	X	M2			P3				X	P
Whiting	X			L3	P2	R2	X		X	
Woodbury Central	X				P3				X	P

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#13 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
A H S T	X			L3		R2		1996		
Anita	X			L2	P3	R2	X	1996	X	
Atlantic	X				P3	R2		1993	X	P
Boyer Valley	X			L2				1996	X	P
C and M	X			L2	P3	R2	X		X	
Clarinda	X				P3	R2			X	
Council Bluffs		M1	X	L2				1996 - 3	X	P
Elk Horn-Kimballton	X			L3		R2	X	1995	X	
Essex	X				P3	R2	X		X	
Farragut	X				P3	R1	X		X	P
Fremont-Mills	X			L3	P3	R1	X	1997	X	
Glenwood						R2		1993	X	
Griswold	X			L3	P3	R2		1996	X	
Hamburg	X			L2	P3	R1	X			
Harlan				L3		R2		1993	X	P
IKM				L2		R2		1996	X	
Lewis Central	X			L3				1996		
Logan-Magnolia				L3	P3	R2				
Malvern	X			L3		R2	X	1996	X	
Missouri Valley				L3	P3	R2		1993	X	
Nishna Valley	X			L2		R2	X	1996	X	
Riverside				L3					X	P
School for the Deaf										P
Shenandoah	X			L3	P3	R2			X	
Sidney	X			L3	P3	R1	X	1993		

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#13 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
South Page	X			L3	P3	R2	X	1997	X	
Treynor							X	1996	X	
Tri-Center	X							1996	X	
Underwood		M2						1996	X	
Walnut				L3			X		X	
West Harrison	X			L2	P3	R2	X	1997		
Woodbine	X			L2	P3	R2			X	S

96

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#14 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Bedford	X			L2	P2	R1		1993	X	
Bridgewater-Fontanelle	X			L2	P3	R1	X		X	
Central Decatur	X			L2	P1	R2			X	
Clarke	X			L2	P2	R2			X	
Clearfield	X			L1	P2	R1	X		X	
Corning	X			L3	P2	R1		1993		
Creston	X			L2	P2	R2			X	
Diagonal	X			L1	P2	R1	X		X	
East Union	X			L1	P2	R2	X		X	
Grand Valley	X			L1	P2	R1	X		X	
Greenfield	X			L3	P3	R1		1993	X	
Lamoni	X	M2		L2	P1	R2	X	1993	X	P
Lenox	X	M2	X	L2	P2	R1	X		X	
Mormon Trail	X			L1	P1	R2	X		X	
Mount Ayr	X			L2	P2	R1		1993	X	
Murray	X			L2	P2	R2	X		X	
New Market	X			L2	P2	R1	X		X	
Orient-Macksburg	X			L2	P3	R1	X		X	
Prescott	X			L2	P2	R1	X		X	
Red Oak	X					R2		1996	X	
Stanton						R2	X		X	
Villisca	X			L3		R2	X	1996	X	

Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#15 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Albia	X			L3	P2	R2		1993	X	
Cardinal	X			L2	P2				X	
Centerville	X			L2	P1	R2			X	
Chariton	X			L3	P3	R2		1993	X	
Davis County	X			L3	P1	R2		1993	X	P
Eddyville-Blakesburg	X			L2	P2			1996	X	P
Fairfield	X				P3	R2		1993	X	P
Fox Valley	X			L1	P2	R1	X	1996	X	
Fremont	X			L3	P3	R2	X		X	
Harmony	X			L2	P2	R1				P
Keota	X				P3	R1	X		X	P
Lineville-Clio	X			L1	P1	R1	X		X	
Moravia	X			L2	P1	R2	X			
Moulton-Udell	X			L2	P1	R2	X	1996	X	
North Mahaska				L3	P3	R2		1996	X	
Oskaloosa				L3	P3	R2		1993	X	P
Ottumwa	X	M2		L2	P2			1996	X	S, P
Pekin	X				P3	R1			X	
Russell	X			L1	P3	R2	X		X	
Seymour	X			L2	P1	R1	X			
Sigourney	X			L2	P3	R1		1993	X	P
Tri-County	X			L3	P3	R1	X		X	
Van Buren	X			L3	P2	R1		1993	X	
Wayne	X			L2	P1	R1		1993	X	

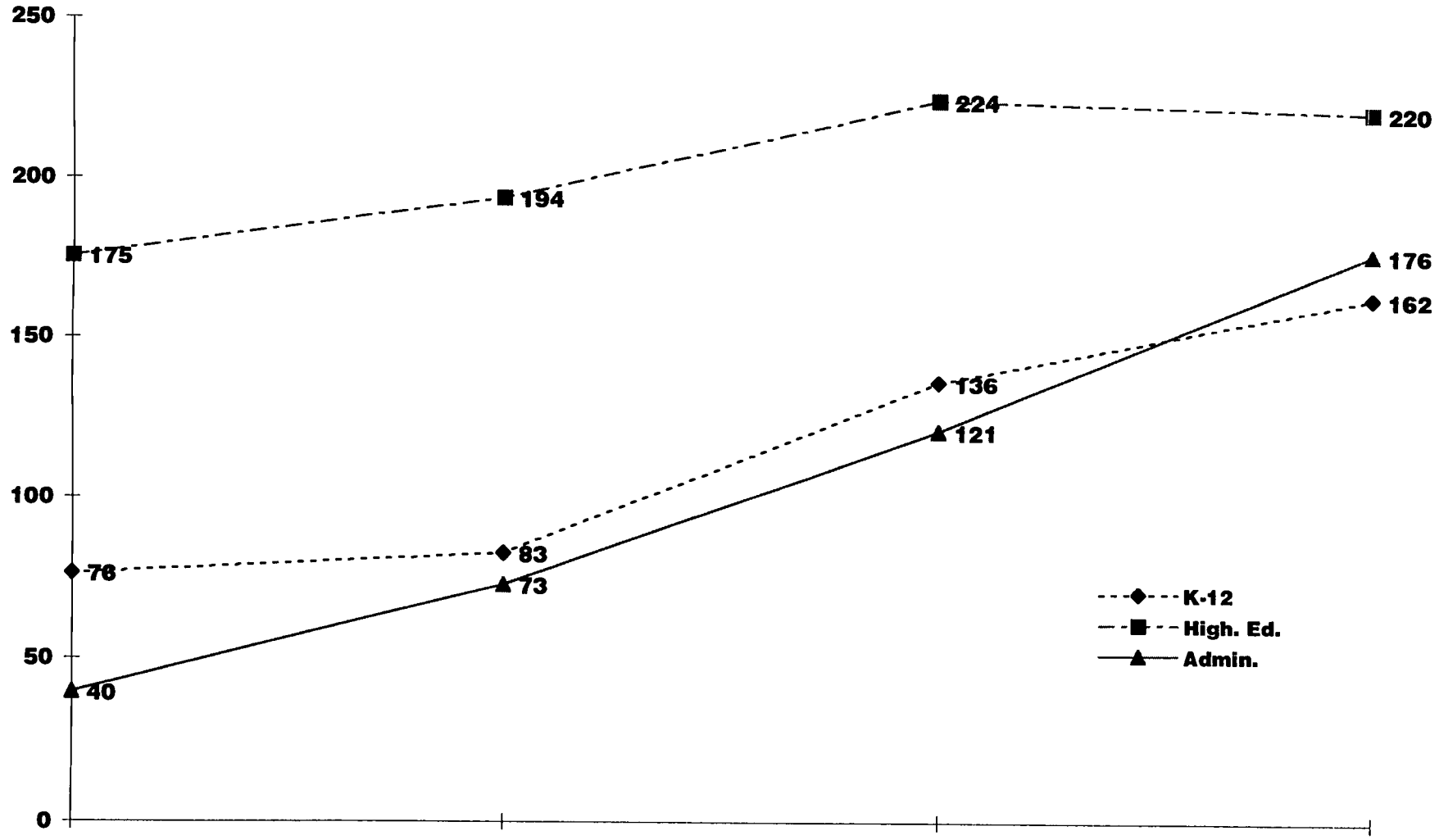
Iowa School Districts: Underserved Populations, ICN Classrooms, Internet Locations, and Project Participants

AEA#16 Iowa School District	Chapter 1 Concentration District	Minority Enrollment (1)	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch (2)	County Poverty Rate (3)	Rural County (4)	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site (5)
Burlington	X	M1		L3	P3			1996	X	P
Central Lee					P3				X	
Danville					P3		X		X	
Fort Madison	X	M2			P3			1996	X	P
Keokuk	X	M2		L2	P3			1996	X	
Mediapolis					P3				X	
Morning Sun		M2		L2		R1	X		X	
Mount Pleasant	X	M2				R2			X	P
New London						R2	X		X	P
Waco						R2			X	
Wapello		M2		L3		R1		1993	X	
West Burlington Independent		M2			P3				X	
Winfield-Mt. Union				L3		R2	X		X	

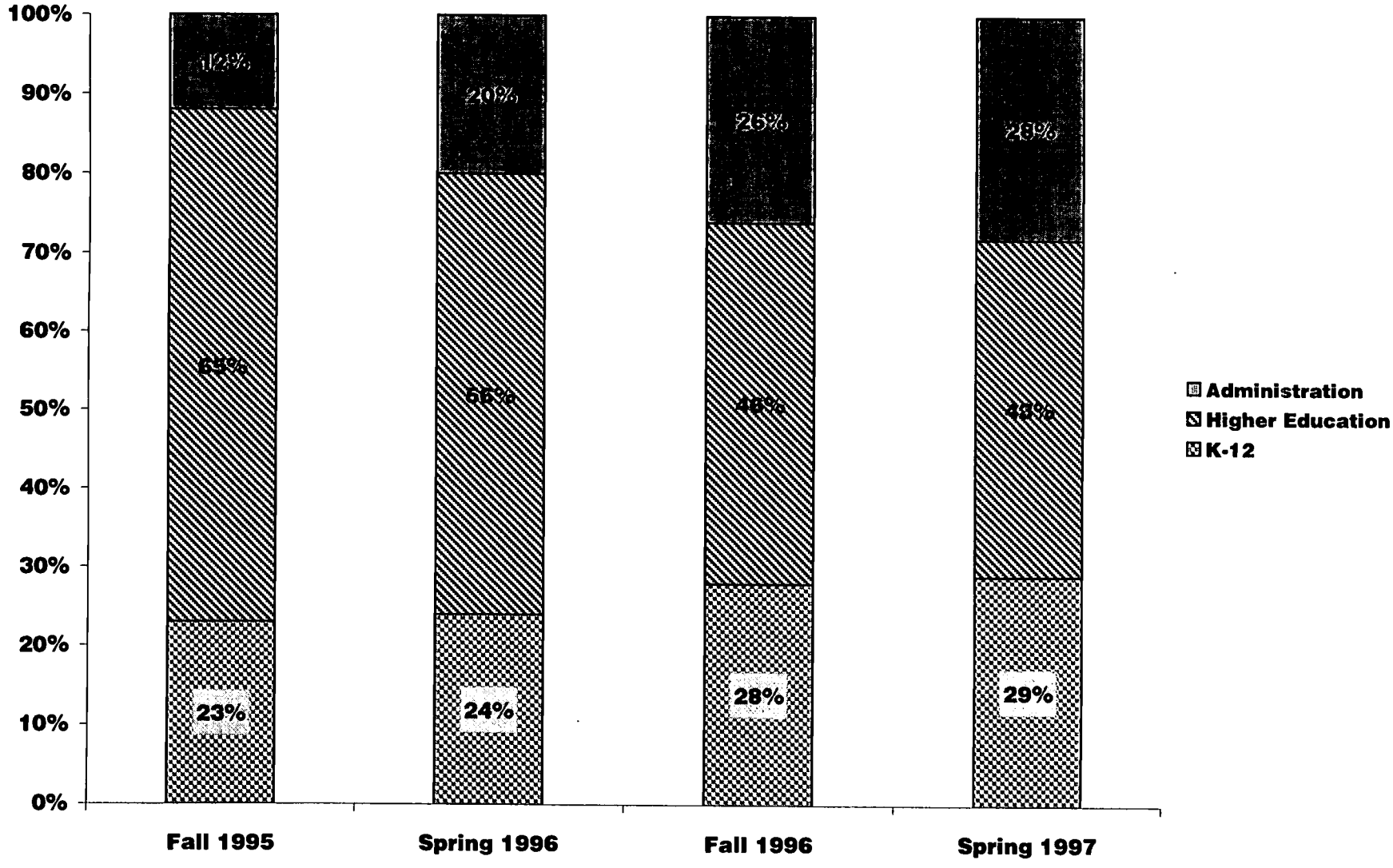
ICN and Internet Connections

Chart: Average Number of ICN Sessions per Week
Chart: Percent of Total ICN Use by Educational Level
Chart: Total Number of Operational ICN Interactive Classrooms
Chart: Location of Operational ICN Interactive Classrooms
Chart: Total Number of Advance Scheduled Courses
Chart: Advance Scheduled Courses by Semester and Subject Area
Table: Advance Scheduled Courses by Semester and Subject Area
Table: Iowa School Districts: Participation in Courses

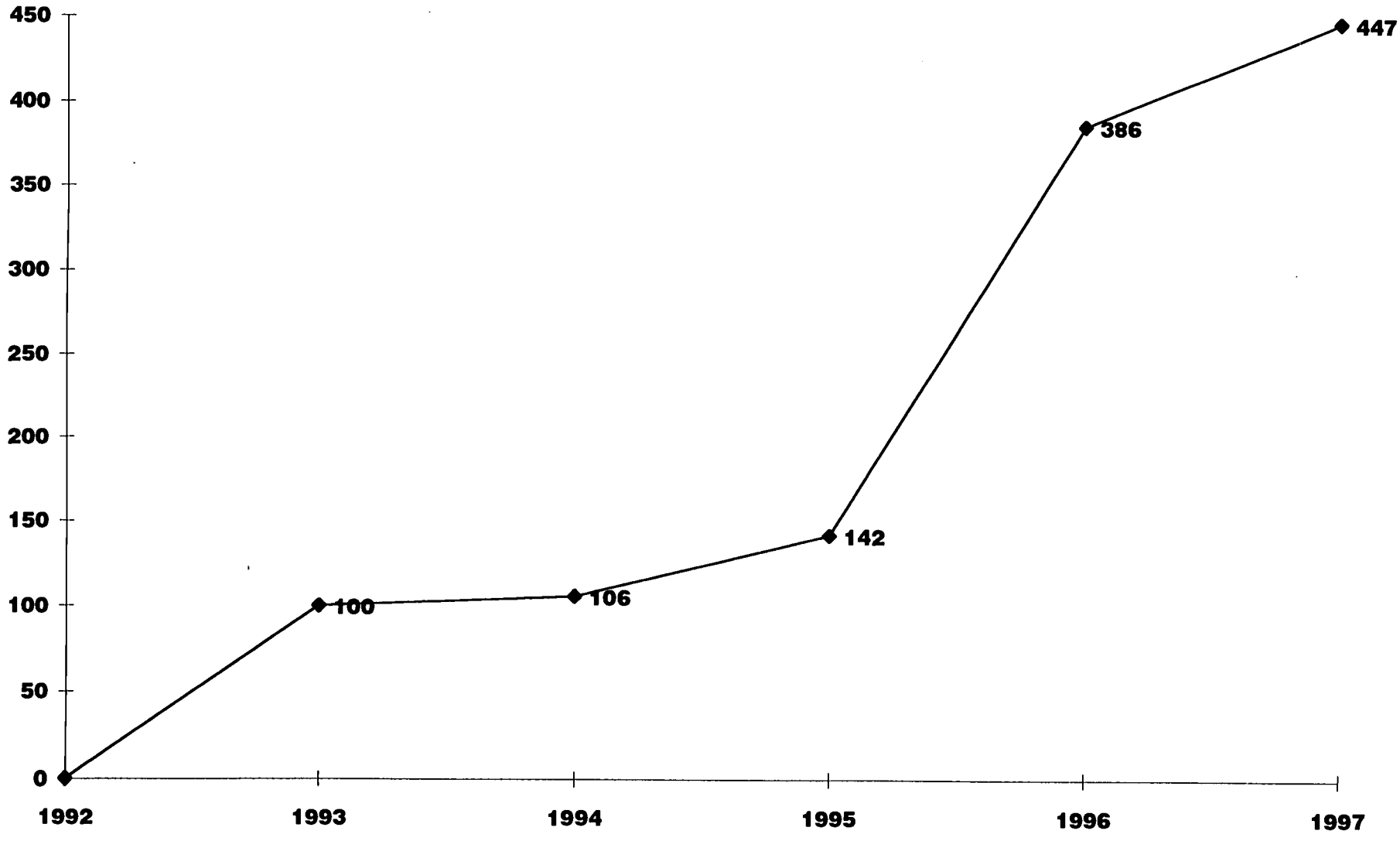
Average Number of ICN Sessions per Week by Semester



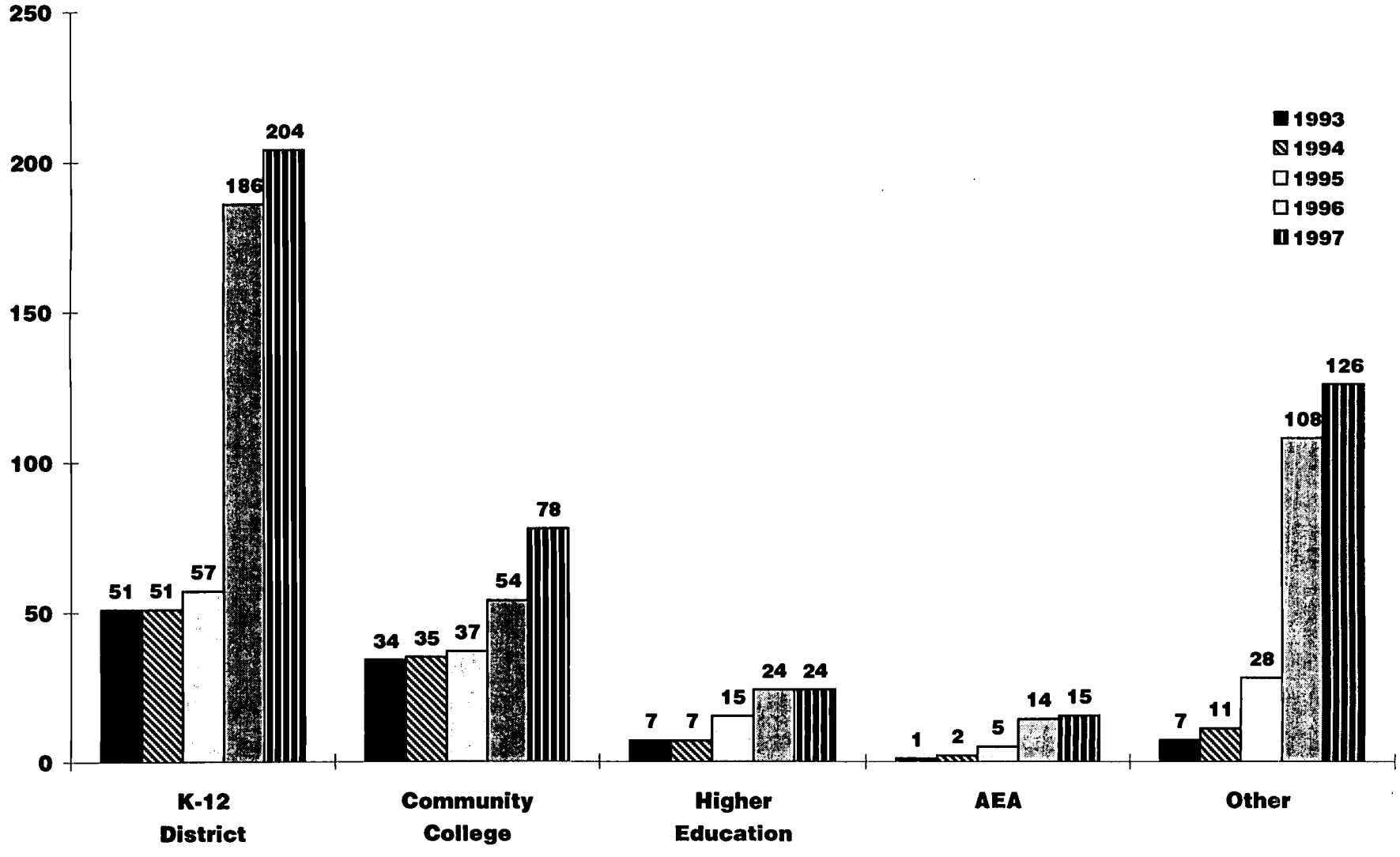
Percent of Total ICN Use by Educational Level Fall 1995-Spring 1997



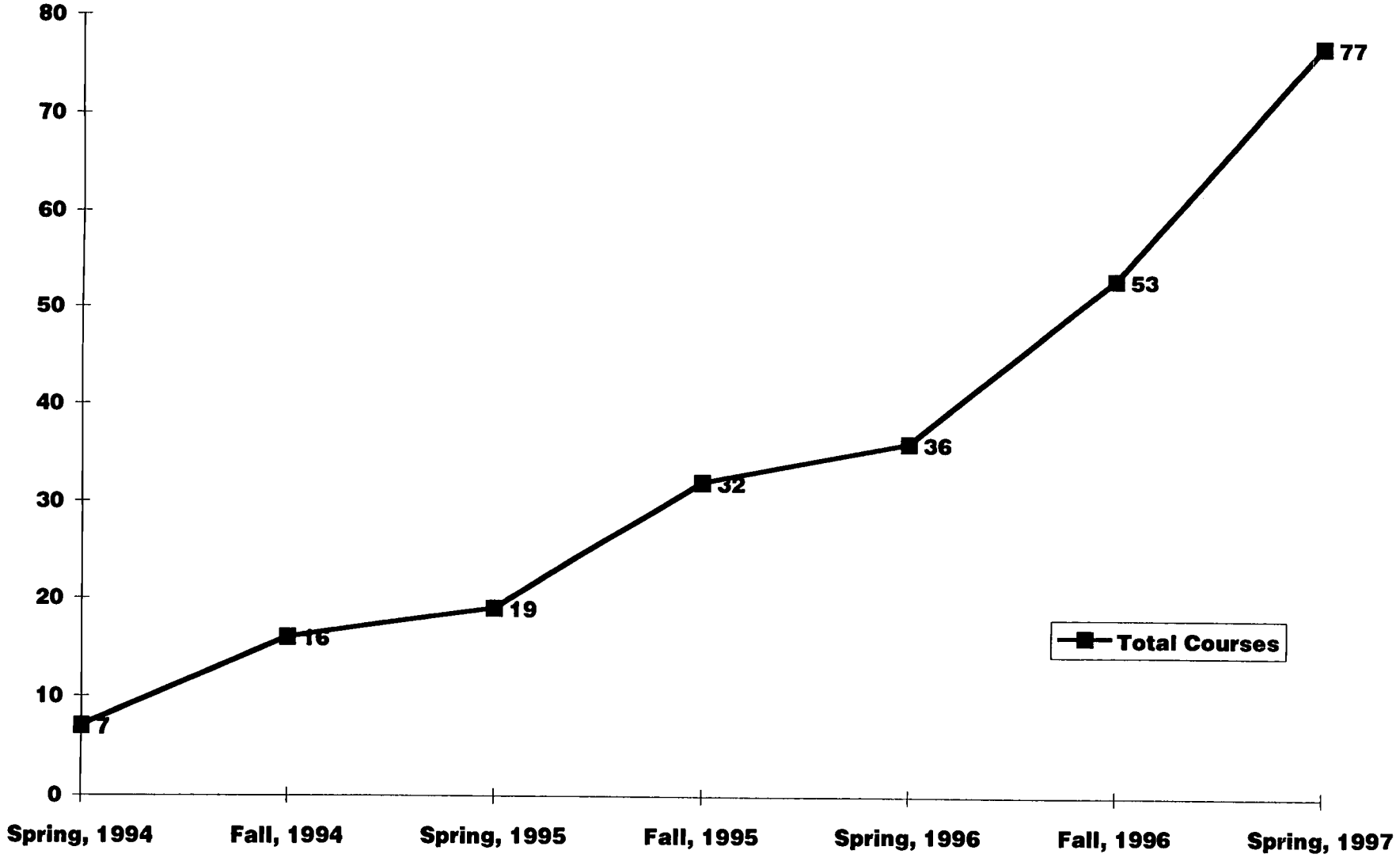
Total Number of Operational ICN Interactive Classrooms



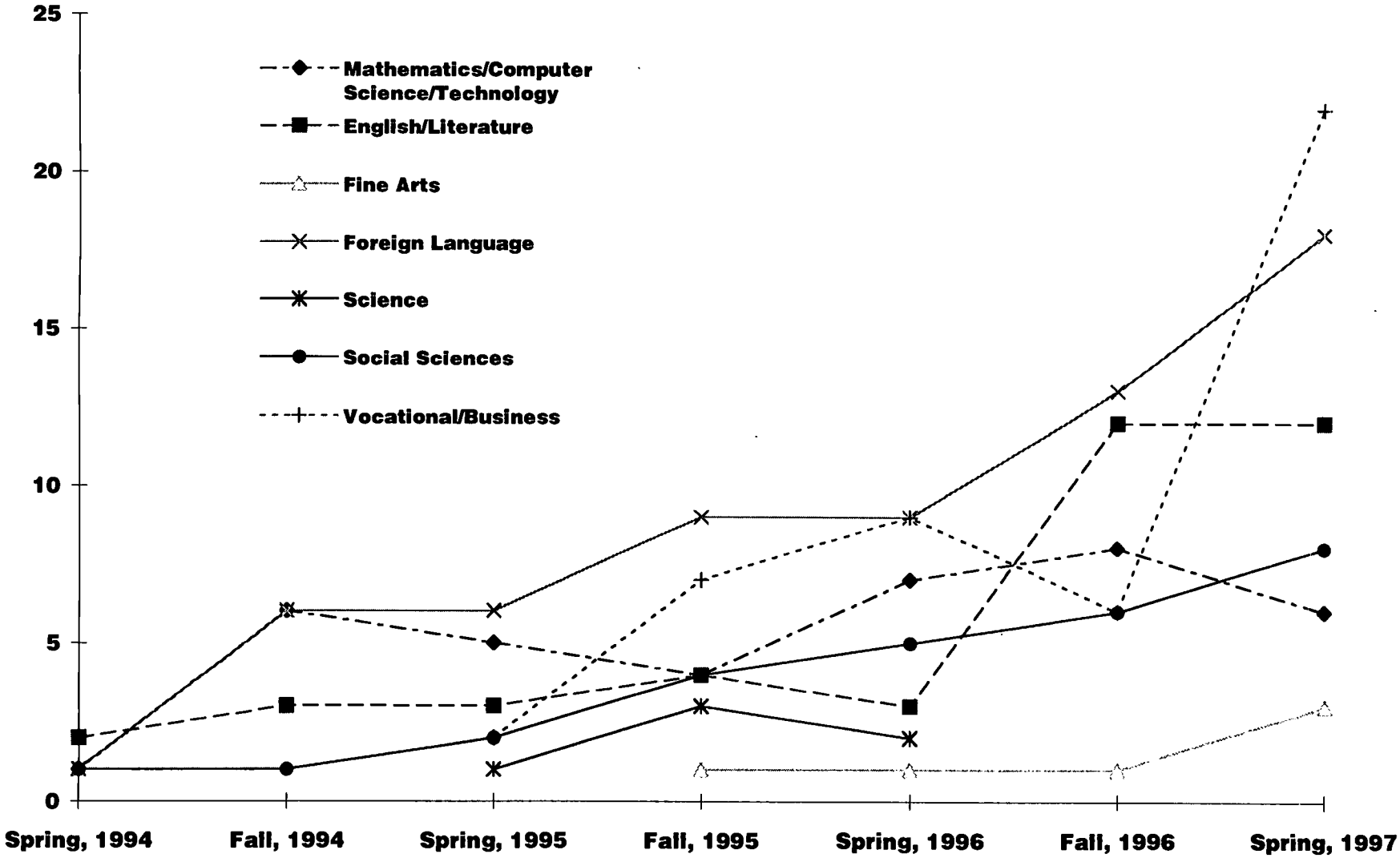
Location of Operational ICN Interactive Classrooms 1993-1997



Total Number of Advance Scheduled Courses on the ICN by Semester



Advance Scheduled Courses on the ICN by Semester and Subject Area



Advance Scheduled Courses on the ICN by Semester and Subject Area

Subject Area	Spring, 1994	Fall, 1994	Spring, 1995	Fall, 1995	Spring, 1996	Fall, 1996	Spring, 1997	Total
Mathematics/Computer Science/Technology	1	6	5	4	7	8	6	37
English/Literature	2	3	3	4	3	12	12	39
Fine Arts	1			1	1	1	3	7
Foreign Language	1	6	6	9	9	13	18	62
Science			1	3	2			6
Social Sciences	1	1	2	4	5	6	8	27
Vocational/Business	1		2	7	9	6	22	47
other						7	8	15
Total Courses	7	16	19	32	36	53	77	240
Staff Development				7	11	6	6	30

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
1	Allamakee	O			V	O, V, V	M, S, O	O, V, V
1	Central				O		O	
1	Decorah							
1	Dubuque							O, F, F
1	Eastern Allamakee							
1	Edgewood-Colesburg							
1	Fredericksburg							
1	Garnavillo							O, V
1	Guttenburg						M, S, O	O
1	Howard-Winneshiek	M, O			S	S, O, V	S	O, V
1	Maquoketa Valley							
1	M-F-L Mar Mac							
1	New Hampton	M, O				V	O	O
1	North Fayette							
1	North Winneshiek							
1	Oelwein	M, O		O	V, F	O, V, F, V	V, M, S, F, F	O, V, V, F, F
1	Postville							
1	Riceville							
1	South Winneshiek	M, O		O	V, O	O, V, V	V, M, S, O	V, V
1	Starmont							
1	Turkey Valley							
1	Valley							
1	West Central							
1	West Delaware County	M, O			FA, V, F	O, V, F, V, V		O
1	Western Dubuque						O	F, F

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
2	Belmond-Klemme							FA
2	Buffalo Center-Rake-Lakota							
2	Cal						SD	O, SD, SD, M, FA
2	Charles City					SS, O	M, SD	FA, SD
2	Clear Lake						SD	FA, SD, SD, SD, SD
2	Corwith-Wesley							SD, SD
2	Forest City		F	F	F, F	SS, M, F, F	F, F, F, F, M	FA, O, F
2	Garner-Hayfield				F, E	F, E	F, F	M, FA, F, F
2	Greene							
2	Hampton-Dumont				V			SD, SD
2	Lake Mills						SD	FA, O
2	Mason City				V, V, V, E	SS, M, V, E	M	M, O
2	Meservey-Thorton							
2	Nora Springs-Rock Falls							
2	North Central						SD	
2	Northwood-Kensett				F	SS, F	F, F, F, F	FA, O, F
2	Osage				F	SS, F	F, F	FA, F, F, SD, SD
2	Rockwell-Swaledale							
2	Rudd-Rockford-Marble Rock							FA

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
2	Sheffield-Chapin							
2	St. Ansgar							
2	Thompson							
2	Ventura							
2	West Hancock							
2	Woden-Crystal Lake							FA, SD, SD

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
3	Armstrong-Ringsted							
3	Burt							
3	Clay Central/Everly							
3	Emmetsburg				M	M, O	L, O	O, O, O, M
3	Estherville					O, O	L, O	SS, O, O, O, O
3	Graettinger							
3	Harris-Lake Park							SD
3	Lu Verne							
3	North Kossuth							
3	Okoboji							SS
3	Ruthven-Ayrshire							
3	Sentral							
3	South Clay							
3	Spencer					O	L, O	O, O, O, F
3	Spirit Lake	F	F	F	F	F, O	L, O, F	O, O, O, F, F, F
3	Terril							
3	Titonka Consolidated							
3	West Bend-Mallard							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
4	Central Lyon						L, L, L, L, O, SS,SS, M	L, SS
4	George							
4	Hartley-Melvin-Sanborn							
4	Little Rock							
4	Marcus-Meriden-Cleghorn							
4	Moc-Floyd Valley							L, L, SS, SS
4	Rock Valley							
4	Sheldon		M	SS, SS	M	SS	L, L, L, L, O, SS,SS, M	L, L, SS, SS
4	Sibley-Ocheyedan		E, E	E, E	F	F	L, L, L, L, M, SS, SS	L, L, SS, SS
4	Sioux Center				CS		L, L, O	L, L, SS, SS
4	South O'Brien							
4	West Lyon							
4	West Sioux							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
5	Alta							
5	Clarion-Goldfield							
5	Dows							
5	Eagle Grove							
5	East Greene							
5	Fort Dodge							
5	Gilmore City-Bradgate							
5	Humboldt							
5	Jefferson-Scranton		M, SS	M	M, SS	M, M	M, SS	M
5	Lake View-Auburn							
5	Laurens-Marathon							
5	Manson-Northwest Webster							
5	Newell-Fonda							
5	Northeast Hamilton							
5	Odebolt-Arthur							
5	Paton-Churdan							
5	Pocahontas Area							
5	Pomeroy-Palmer							
5	Prairie Valley							
5	Rockwell City-Lytton						L, M, O	V, M, L
5	Sac							
5	Schaller-Crestland							
5	Sioux Central							
5	South Hamilton							
5	Southeast Webster							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
5	Storm Lake							
5	Stratford							
5	Twin Rivers							
5	Wall Lake							
5	Webster City							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
6	Alden							V
6	BCLUW							V
6	Brooklyn-Guernsey-Malcolm							
6	East Marshall							
6	Eldora-New Providence							
6	Gladbrook							
6	GMG							V
6	Grinnell-Newburg							
6	Hubbard-Radcliffe							V
6	Iowa Falls							M, V
6	Marshalltown	F	F	F	SS, F	F	F	V, F, F, F, F
6	Montezuma							
6	South Tama County		M	M	SS	M		M
6	Wellsburg-Steamboat Rock							V, V
6	West Marshall							V

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
7	Aplington							
7	Cedar Falls	FA					SD	
7	Clarksville							
7	Denver							
7	Dike							
7	Dunkerton							
7	East Buchanan							
7	Grundy Center				F	F, O, O	V, SS, SD	SD, O, O, O, O
7	Hudson							
7	Independence		F	F	F	F	V, SS, SD	SD, O, O, O, O
7	Janesville Consolidated							
7	Jesup							
7	Nashua							
7	New Hartford							
7	North Tama County							
7	Parkersburg							
7	Plainfield							
7	Reinbeck							
7	Sumner							
7	Tripoli							
7	Union							SD
7	Wapsie Valley							
7	Waterloo				F, V	F	V, SS, SD	SD, O, O, O, O
7	Waverly-Shell Rock						SS, SD	SD, O, O, O, O

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
9	Bellevue							
9	Bennett							
9	Bettendorf				S, V			F
9	Calamus/Wheatland							O
9	Camanche							
9	Central Clinton							
9	Clinton				O			
9	Columbus							
9	Davenport							
9	Delwood							
9	Durant							
9	East Central							
9	Louisa-Muscatine							
9	Maquoketa							O
9	Muscatine				F, V, V	O		F
9	North Scott							
9	Northeast							
9	Pleasant Valley							
9	Preston							
9	West Liberty							
9	Wilton							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
10	Anamosa							
10	Belle Plaine							
10	Benton							
10	Cedar Rapids				V, V, V		L, L, FA	O
10	Center Point-Urbana							
10	Central City							
10	Clear Creek-Amana							
10	College							
10	Deep River-Millersburg							
10	English Valleys							
10	H-L-V						L, L, FA, O	O
10	Highland							
10	IA Braille & Sight School							
10	Iowa City					FA	L, L	
10	IA Mennonite							
10	Iowa Valley							
10	Linn-Mar							
10	Lisbon							
10	Lone Tree							
10	Marion Independent						O	O
10	Mid-Prairie							
10	Midland							
10	Monticello						L, L	
10	Mount Vernon							O
10	North Cedar							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
10	Olin Consolidated							
10	Solon							
10	Springville							
10	Tipton						L, L	
10	Vinton-Shellsburg			M			L, L	
10	Washington					O	L, L	
10	West Branch							
10	Williamsburg						L, L	

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
11	Adel-DeSoto-Minburn					O		
11	Ames	SS				O		F
11	Ankeny					V	O	
11	Audubon						F	
11	Ballard							
11	Baxter							
11	Bondurant-Farrar							
11	Boone							
11	Carlisle							
11	Carroll							
11	Colfax-Mingo							
11	Collins-Maxwell							
11	Colo-Nesco							
11	Coon Rapids-Bayard							
11	Correctional Facility							
11	Dallas Center-Grimes							
11	Des Moines Independent				SS	O		
11	Dexfield							
11	Earlham							
11	Exira							V
11	Gilbert							
11	Glidden-Ralston							
11	Grand							
11	Guthrie Center					M		
11	Indianola							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
11	Johnston	FA			V, V, V	V, V, V, O, O, O		F
11	Knoxville							
11	Lynnville-Sully							
11	Madrid							
11	Manning							
11	Martensdale-St.Marys							
11	Melcher-Dallas							
11	Nevada							
11	Newton				F	F, O		
11	North Polk							
11	Norwalk							
11	Ogden							
11	Panorama							
11	PCM							
11	Pella					O		
11	Perry							
11	Pleasantville							
11	Roland-Story							F
11	Saydel Consolidated							
11	Southeast Polk							
11	Southeast Warren							
11	Stuart-Menlo							
11	Twin Cedars							
11	United							
11	Urbandale							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
11	Waukee							
11	West Des Moines							
11	Winterset					V, O		
11	Woodward-Granger							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
12	Anthon-Oto							
12	Ar-We-Va							
12	Aurelia							
12	Battle Creek-Ida Grove				F	F	L, L, L, O, SD	
12	Charter Oak-Ute							
12	Cherokee	M			M, S	V	SD	
12	Denison					V	SD	
12	East Monona							
12	Eastwood							
12	Galva-Holstein							
12	Hinton							
12	Kingsley-Pierson							
12	Lawton-Bronson							
12	Le Mars	E	E	S, E	S, F	S, F	L, L, L, O, SD	L, L, L, V, SS
12	Maple Valley	E	M	M, S	S, F	S, F	L, L, M, O, SD	V, M, L
12	Remsen-Union							
12	Schleswig							
12	Sergeant Bluff-Luton							
12	Sioux City				V	SS	SD	
12	West Monona							
12	Westwood							
12	Whiting							
12	Willow							
12	Woodbury Central							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
13	Atlantic		M		M, E	M, M, M		
13	Boyer Valley							F, F
13	C and M							
13	Clarinda				E		O	O
13	Council Bluffs				V, E	M, E		
13	Elk Horn-Kimballton							
13	Essex							
13	Farragut							
13	Fremont-Mills							
13	Glenwood	SS	M		M, V, V, E	M, M, M		
13	Griswold							V
13	Hamburg							
13	Hancock-Avoca							
13	Harlan				E	E		
13	IKM							
13	Lewis Central							
13	Logan-Magnolia							
13	Malvern							
13	Missouri Valley				F, F	F, F	F	F
13	Nishna Valley							
13	Riverside							
13	School for the Deaf							
13	Shelby							
13	Shenandoah							
13	Sidney				E			

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
13	Treynor							
13	Tri-Center							
13	Underwood							F, F
13	Walnut							
13	West Harrison							
13	Woodbine							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
14	Bridgewater-Fontanelle							
14	Central Decatur							
14	Clarke				E		O	O
14	Clearfield							
14	Corning				M, E	M	M	SS
14	Creston				E	O, O		
14	Diagonal							
14	East Union							
14	Grand Valley							
14	Greenfield				F, E	F	F	F, F
14	Lamoni							SS
14	Lenox							
14	Mormon Trail							
14	Mount Ayr		F	F	SS, S, F, F, E	M, S, F, F	F, F, S, V	F, F, SS, O
14	Murray							
14	New Market							
14	Orient-Macksburg							
14	Prescott							
14	Red Oak				E			
14	Stanton							
14	Villisca							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
15	Cardinal						V, M, M, M, L, O, SS	
15	Centerville				M	SS, O, O	V, M, M, M, L, O, O, SS, SS	V, V, SS, L, SS, O, L, M, O, SS, V
15	Chariton	E			SS	SS, O, O		V, SS, O, O, O, SS, L, SS, L, O, SS, FA, L, V, M, SS, O, SS, SS, V
15	Davis County		F	F	SS	O, V		S, F, M
15	Eddyville-Blakesburg							V, FA, L, V, M, O
15	Fairfield						V, M, M, M, L, O, SS	V, V, L, SS, SS, O, L, V, M, O
15	Fox Valley							M
15	Fremont							
15	Harmony							
15	Keota							
15	Lineville-Clio							
15	Moravia							
15	Moulton-Udell							V, S, L, SS, F, M, FA, V, M, O
15	North Mahaska							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

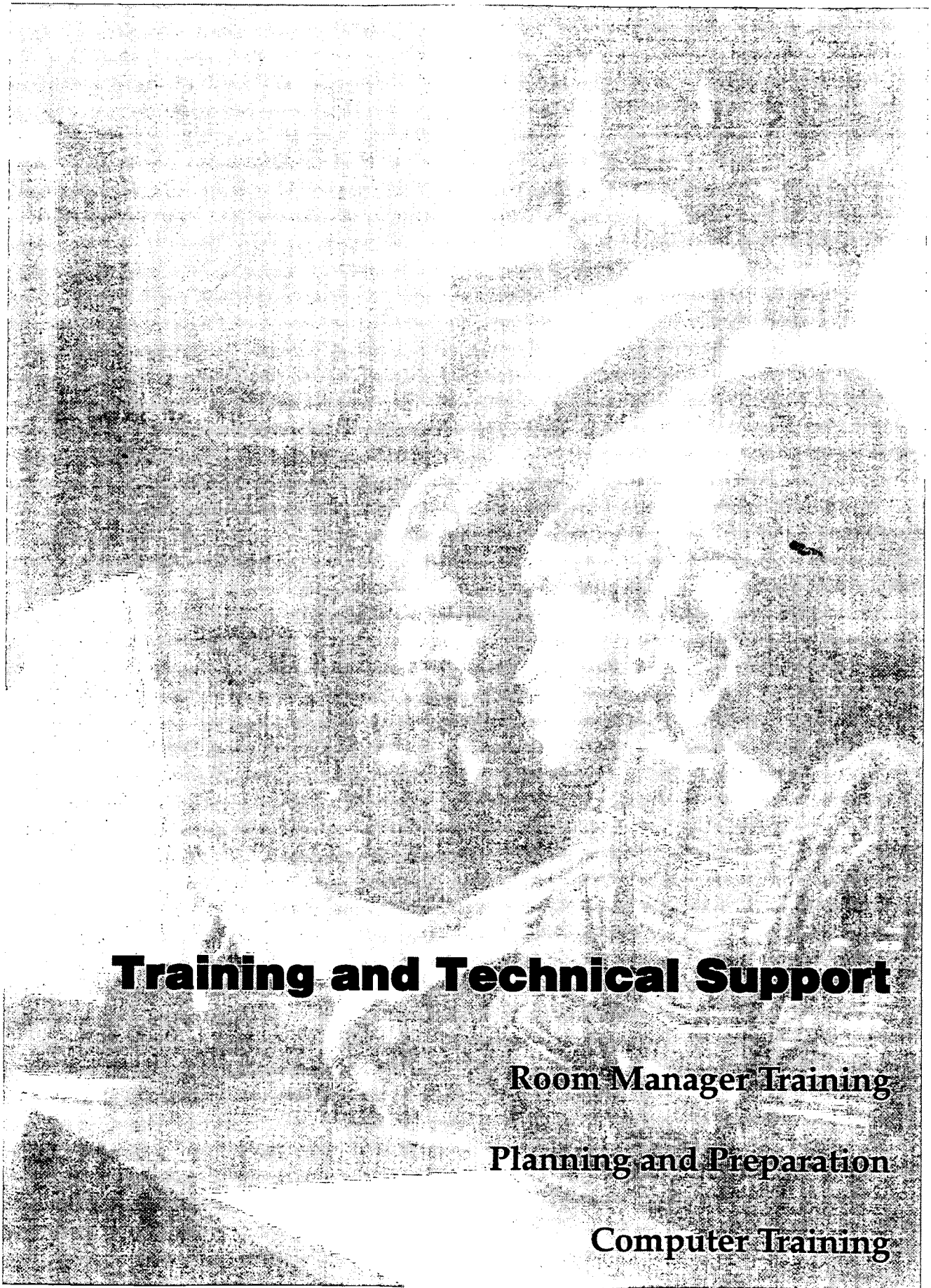
AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
15	Oskaloosa				SS, O, M	SS, O, O	M, O, O, SS	
15	Ottumwa					O, O	V, F, F, M, M, M, L, O, O, SS	V, V, SS, O, O, O, L, SS, L, O, O, F, F, FA, L, V, M, SS, O, SS, SS, V
15	Pekin							
15	Russell							
15	Seymour							
15	Sigourney			E	E	O, E	V, M, M, M, L, L, SS	L,L,L, V, V, SS, O, O, M
15	Tri-County							
15	Van Buren	E			E	SS, SS, O, O, E	V, M, M, L, L, SS	V, L, SS, O, O, O, SS, SS, L, O SS, FA, L, V, M, SS, O, SS, SS, V
15	Wayne						V, M, M, L, O, SS, M, O	V, V, L, SS, O, L, V, M, O

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other

Iowa School Districts: Participants in Advance Scheduled Courses

AEA #	Iowa School District	Spring 1994	Fall 1994	Spring 1995	Fall 1995	Spring 1996	Fall 1996	Spring 1997
16	Central Lee							
16	Danville							
16	Fort Madison						F	
16	Keokuk						F	
16	Mediapolis							
16	Morning Sun							
16	Mount Pleasant							
16	New London							
16	Waco							
16	Wapello						F	
16	West Burlington Independent						F	
16	Winfield-Mt. Union							

Codes: A=All subjects; M=Math/Computer Science; FA=Fine Arts; F=Foreign Language; L=Language Arts/English; S=Science;V=Vocational Education; SS=Social Studies; SD=Staff Development; O=Other



Training and Technical Support

Room Manager Training

Planning and Preparation

Computer Training

Training and Technical Support

Goal 3: Local and regional educational personnel will receive technical training and planning assistance to ensure that students and educators can easily access distance learning technologies in an efficient manner.

Objectives related to this goal include providing

1. training for "troubleshooting" ICN video classroom equipment,
2. assistance with planning and preparation for local distance learning, and
3. training to develop computer-based skills for educators.

Room Manager (ICN Troubleshooting) Training

The project was successful in offering training to troubleshoot problems in the ICN classrooms as well as to familiarize new sites with procedures and educational possibilities. Participants rated the training sessions positively.

Accountability

- Nine room (Site) manager's training sessions were conducted with a total of 125 participants.
- In addition, as each K-12 site came on line, a welcome session was held. Each of these sessions included 2-4 individuals from the LEA, one representative from the AEA, and one representative from the community college. Preliminary materials mailed to each site included a classroom notebook, and a pocket folder with related information.

Effectiveness

- All of those responding to the survey indicated that they would recommend this workshop to another teacher/administrator.
- Participants liked the content of the workshop as well as the pace, clarity, and organization of instruction. Suggestions for improvement included connecting with another ICN site, providing more demonstrations, and "simulate a real problem and have us solve it".

Impact

- Focus groups and site visits occurring in Spring 1998 will provide information related to impact.

Planning and Preparation

Regional coordinators have been assisting local schools in planning and preparing for connection to the ICN and/or Internet and report that increasing numbers of schools are requesting assistance with planning. The project has been effective in encouraging schools to invest in new technologies.

Accountability

- Three regions planned to use project funding to assist schools with technology planning or to provide technical support. Five regions reported providing technical support services including both ICN and Internet consulting services as well as support for training in this area.

Effectiveness

- Regional coordinators reported that the Star Schools project has provided the impetus for many schools to move forward with plans to connect their district to the ICN and their classrooms and buildings through LANs and WANs.
- Site visits to schools and AEAs in Spring 1998 should provide insight related to the adequacy of planning and preparation assistance being provided.

Impact

- The number of schools acquiring ICN and Internet technologies continues to grow.
- Technology funding at the local and state level is on an increase.

Computer Training

Accountability

- 56 computer training workshops were conducted across the state between October 1996 and September 1997.
- A total of 980 people participated in the computer workshops which included Internet, Powerpoint, Word-processing, and other software applications.

Effectiveness

- Workshops were held around the state at several AEAs and at UNI.
- Almost half of those attending computer workshops (45.5%) were there to meet a personal need. About 30% were there to meet a building or district identified goal or need.
- 97% of those responding identified the workshop as being learner centered. 37% indicated that the hands-on approach was the best thing about the workshop.
- Suggestions for improving the workshop included allowing more time, providing a detailed hand-out, and scheduling follow-up sessions.

Impact

- 83% of those who completed an evaluation survey indicated that the workshop would have a practical effect on them becoming a better teacher or administrator. The few that responded "no" indicated that they were not a teacher or administrator.
- The demand for workshops continues to grow. For one workshop with only 20 slots 100 people had to be turned away.

Training and Technical Support

Table: Summary of Room Managers Training Evaluations
Table: Summary of Computer Training Workshops
Table: Summary of Computer Workshop Evaluations

Summary of Room Managers Training Workshop Evaluations 1996-1997 in Percent of Total Responses for Each Question

	Percent
Why were you enrolled in this workshop? You may check more than one.	
To meet a building or district identified goal or need.	46.3%
To meet a personal need.	29.3%
Requested/required by administrator/district.	14.6%
Recommended by colleague.	8.5%
Other	1.2%
Will this workshop have a practical effect on your becoming a better teacher or administrator?	
Yes	96.0%
Uncertain	2.0%
No	2.0%
Was the instructional style of the workshop learner centered?	
Yes	98.0%
Uncertain	2.0%
No	0.0%
Would you recommend this workshop to another teacher/administrator?	
Yes	100.0%
Uncertain	0.0%
No	0.0%
What did you like best about this workshop?	
Instruction (pace, clarity, organization)	34.6%
Content	32.7%
Instructor (knowledge, patience, assistance)	19.5%
Hands-on experience	15.7%
What suggestions do you have for improving this workshop?	
Change content	40.0%
More hands on	33.3%
Comfort of participants	20.0%
Simulate "real" problems	6.7%

Summary of Room Managers Training Workshop Evaluations 1996-1997 in Percent of Total Responses for Each Question *continued*

	Percent
What did you like best using the ICN for this workshop?	
Practical Experience	70.3%
Location	18.9%
Comfort	8.1%
What suggestions do you have for Using the ICN more effectively for workshops?	
More hands on	33.3%
Comfort of participants	26.6%
Provide scheduling information	26.7%
Facilitate managers getting together over the ICN	13.3%
More information for public and students ICN	6.7%

Summary of Computer Training Workshops Conducted Oct. 1996 through Aug. 1997

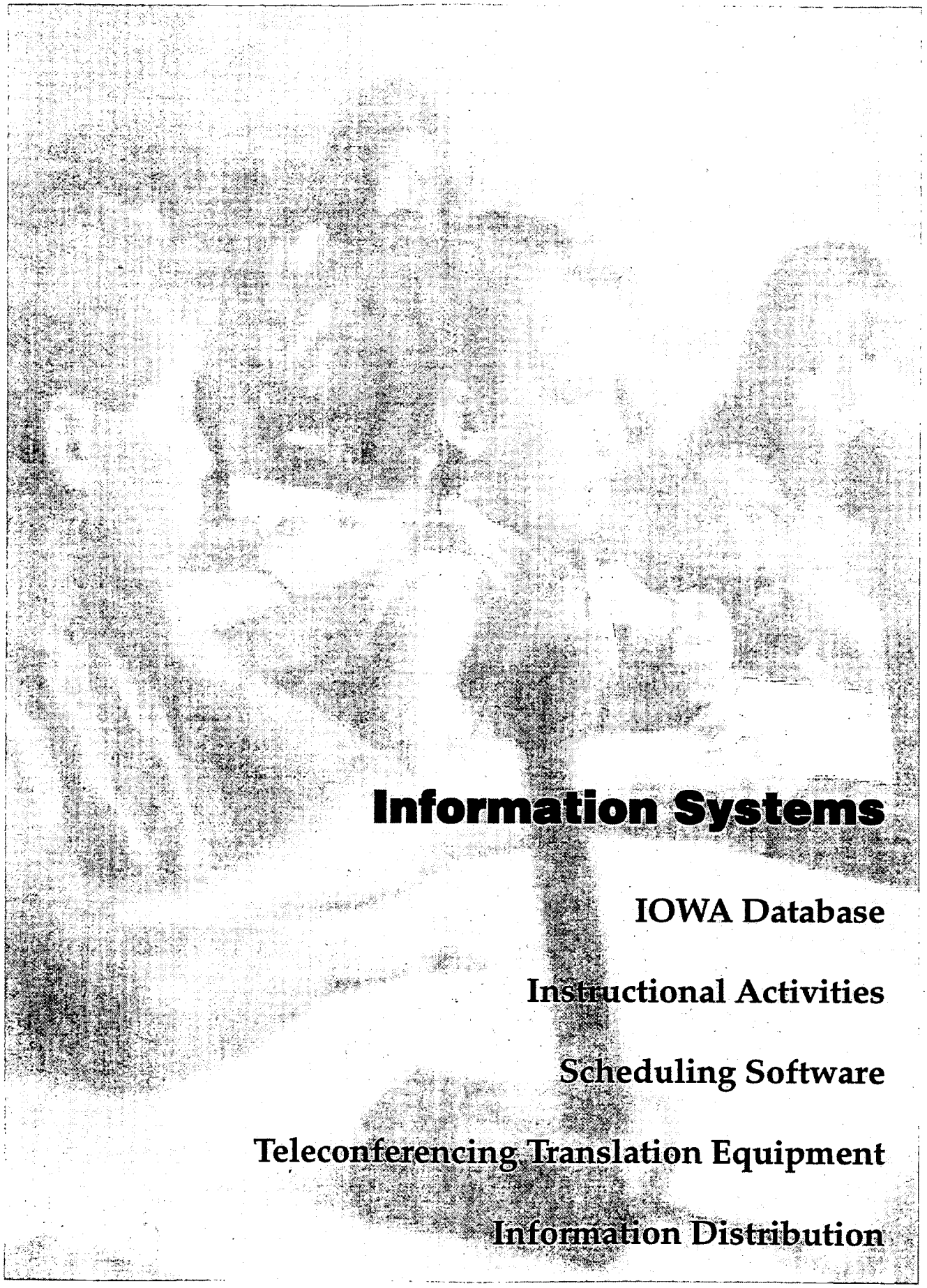
		Participants						
Training Category	Number of Workshops	Elementary Education	Secondary Education	Higher Education	Administration	Other	No Response	Total
Internet	26	102	65	0	8	144	183	**502**
Powerpoint	18	28	60	0	15	87	59	**249**
Wordprocessing	6	12	4	0	2	25	44	**87**
Misc. Software	6	11	0	66	10	32	23	**142**
TOTAL	**56**	**153**	**129**	**66**	**35**	**288**	**309**	**980**

Summary of Computer Workshop Evaluations 1996-1997 in Percent of Total Responses for Each Question

	Internet	Powerpoint	Wordprocessing	Other	TOTAL
Why were you enrolled in this workshop? You may check more than one.					
To meet a personal need.	44.4%	48.9%	38.3%	49.1%	**45.5%**
To meet a building or district identified goal or need.	28.8%	26.6%	36.5%	24.6%	**28.7%**
Requested/required by administror/district.	18.3%	9.0%	17.4%	3.5%	**14.5%**
Recommended by colleqgue.	3.7%	8.2%	5.2%	8.8%	**5.6%**
Other	4.7%	7.2%	2.6%	14.0%	**5.8%**
Will this workshop have a practical effect on your becoming a better teacher or administrator?					
Yes	78.9%	87.7%	90.3%	84.6%	**82.9%**
Uncertain	18.9%	11.9%	9.7%	15.4%	**15.8%**
No	2.2%	0.4%	0.0%	0.0%	**1.4%**
Was the instructional style of the workshop learner centered?					
Yes	99.3%	96.2%	100.0%	91.3%	**97.1%**
Uncertain	0.5%	2.1%	0.0%	8.7%	**1.9%**
No	0.2%	1.7%	0.0%	0.0%	**1.0%**
Would you recommend this workshop to another teacher/administrator?					
Yes	97.1%	99.6%	100.0%	100.0%	**98.2%**
Uncertain	2.7%	0.4%	0.0%	0.0%	**1.6%**
No	0.2%	0.0%	0.0%	0.0%	**0.1%**

Summary of Computer Workshop Evaluations 1996-1997 in Percent of Total Responses for Each Question

	Internet	Powerpoint	Wordprocessing	Other	TOTAL
What did you like best about this workshop?					
Hands-on experience	39.6%	37.2%	19.6%	31.6%	**37.0%**
Content	34.1%	27.0%	32.1%	42.1%	**31.8%**
Instructor (knowledge, patience, assistance)	14.0%	20.0%	21.4%	21.1%	**17.0%**
Instruction (pace, clarity, organization)	12.3%	15.8%	26.8%	5.3%	**14.2%**
What suggestions do you have for improving this workshop?					
Time	48.8%	61.7%	53.5%	53.8%	**55.0%**
Technical	18.1%	9.1%	7.0%		**12.4%**
Need detailed hand-out	10.2%	7.2%	4.7%	26.9%	**9.3%**
Comfort of participants	8.8%	9.1%	4.7%		**8.1%**
Provide more examples	5.1%	2.9%	11.6%	3.8%	**4.7%**
Change amount of information covered	5.1%		18.6%	3.8%	**4.1%**
Offer follow-up	3.7%	3.8%		3.8%	**3.4%**
Instruct participants to bring disk/materials		6.2%		7.7%	**3.0%**



Information Systems

Goal 4: Iowa educators and students will have access to information concerning distance education opportunities and will be provided with actual experiences utilizing distance education technologies in targeted curricular areas.

Objectives related to this goal include:

1. expanding information available in the Iowa Database,
2. providing instructional activities over the ICN,
3. developing scheduling software for ICN video sites,
4. acquiring teleconferencing translation equipment that can be used to connect to other networks, and
5. producing and distributing information about the ICN to educators and students.

Materials, tables, and charts related to information systems are located at the end of this section.

Iowa Database

The Iowa Database has an entire new look for 1996-97. New links have been established and a variety of new information is available. Use of the database continues to increase.

Accountability

- Links to State agencies and professional organizations have been added.
- New sections included "Earth Trails: Loess" (which describes this innovative computer based program that allows students to explore the geology, fauna, and flora of the Loess Hills), and educational want ads where individuals can search possible offerings in distance education. They are also given the opportunity to add "want ads" of their own.

Effectiveness

- Use of the Iowa Database has increased since June, 1996. Actual counts for 1996-97 are not available due to a technical problem (a server crashed). This has been resolved and data will be readily available in the future. However, the counts will be lower reflecting a change in counting procedures.
-

Impact

- The Iowa Database continues to generate both national and international interest. Because of technical difficulties, actual file transfer information was not available.
- Samples from the "Comments to Iowa Database" can be grouped in three categories: information updates, questions related to "how to", and suggestions.
- "How to" comments included comments related to navigation and finding specific information on the Iowa database, "How do I down load...", Where are the ICN classroom phone and FAX number located", "Can compressed video equipment connect to your system?".
- Suggestions include requests for links and suggestions for information that should be available at the site such as listing of transmission costs, availability of college classes on the ICN, and sorting or search capabilities.

Instructional Activities

The number of demonstration instructional activities offered via the ICN continues to increase. Opportunities include virtual field trips and expanded opportunities for staff development.

Accountability

- A total of 26 different demonstration sessions were offered via the ICN during the 1996-97 school year. This is a significant increase over the six events offered the previous year.
- K-12 learners were able to take virtual (live video) field trips to Living History Farms, Saylorville Gorge and DeSoto National Wildlife Refuge. More field trips are planned for 1997-98 including visits to a tall grass prairie and with scientists and engineers living in a NASA pressure chamber.
- Teachers were given the opportunity to participate in several national video conferences including Kids are Alright: Rock and Roll and "Planning for Educational Technology".

Effectiveness

- The total number of sites participating in distance learning demonstration sessions was 365 in contrast to 24 sites during 1995-96.
- Approximately 5,000 K-12 learners and 500 teachers participated in the demonstration sessions.

Impact

- One major impact of these educational events, is K-12 learners connecting with other K-12 learners around the state. When asked "what did you like best about the sessions?", students repeatedly identified sharing with students at other sites. The content of the session was a close second.
- Teachers liked the exposure to the technology for both themselves and their students. Being able to offer their students an educational opportunity not previously possible was a big plus. "We liked being able to see a quartet from the symphony that we would not have a chance to see in our town."
- Reactions to using the ICN were positive from both students and teachers.
- Demand for these educational events continues to increase. Extra sessions were scheduled in an attempt to meet the demands, but many schools were not able to participate due to lack of space.

Scheduling Software

After thorough testing, the new scheduling software is now in full use. Most notably it is available through the Iowa Database.

Accountability

- Cisco scheduling software has been purchased and was pilot tested by IPTV schedulers, National Guard schedulers, and schedulers in regions 10 and 15 during the summer and for scheduling of Spring, 1997 activities on the ICN.
- Scheduling software is fully operational at this time and available through the Iowa database.
-

Effectiveness

- Schedulers now have instant access to site availability and daily schedule information.
- Reservations can be made directly through the Iowa Database

Impact

- Delays in scheduling have declined with the use of the new software. Conflicts can be identified immediately with the immediate access to site availability provided.

Teleconferencing Translation Equipment

T-1 and Desktop Video conferencing equipment was purchased Summer 1996. This equipment was tested during 1996-97 with mixed results. Connections were made with University of Northern Illinois and with Texas' Educational Service Units. New equipment has since been purchased and will be tested with several connections outside of Iowa during Fall 1997.

Information Distribution

Brochures, pamphlets, and videos developed as part of the previous Star Schools project continued to be distributed on request. New materials were distributed as they became available.

Accountability

- A new Samplers video and new brochures were produced and distributed.

Effectiveness

- Approximately 300 copies of the Sampler video have been distributed to date.
- 25,000 copies of "Iowa: A commitment to Education" were printed and about half have been distributed to date. 200 copies were sent to each AEA and RTC. Others have been distributed upon request.
- A new flyer was printed and distributed for the Iowa Database.

Impact

- Requests from both in-state and out-of-state for materials continues to increase. There is continued interest in the video series, monographs, and brochures that have produced as part of this project.

Information Systems

Iowa Database: Home Page
Iowa Database: Projects
Iowa Database: Educational Want Ads
Table: Summary of Distance Learning Demonstration Sessions
Description of Project Sponsored Instructional Activities
Description of 1997-98 Planned Instructional Activities
Scheduling on the Iowa Database
Flier: Iowa Database
Flier: Education Sites on the ICN

iowa database

A Resource for Distance Education -

"*Education makes people easy to lead, but difficult to drive; but impossible to enslave .*"
- Henry Peter Broughan

- Iowa Communications Network
- State Agencies
- Area Education Agencies
- World of Education
- State Professsional Organizations
- ICN Part 3 Plan
- Showcase on Technology
- Surf the Web

Welcome to the Iowa Database, a Resource for Distance Education!!

To learn more about the Iowa Database or the Iowa Communications Network, please visit our Information Kiosk.

What's Ne

Cisco on the Web
ICN Classroom Schedı
Earth Trails: Loess
ITTC Administrative F
Final Connection News
K-12 Demonstration Pı
Interactive Classroom
Educational Want A

NCREL - Pathways

New Iowa Schools Development Corporation

First in the Natio in Education

FINE Link

This site supported by funds from
the USDE Star Schools Grant Program
#R203 F5000 1-96

Projects

Loess Hills Interactive
PILOT VERSION

EARTH TRAILS
LOESS

Mississippi River
HERITAGE PROJECT

Currently, there are multiple projects in the process of development at IPTV InteractiveMedia. The most widely known are the Earth Trails: Loess CD-ROM and the Mississippi River Heritage Project.

The Earth Trails: Loess CD-ROM is a reality-based exploratory computer program that uses the analogy of a field trip to help students learn about the unique history of the Loess Hills of Iowa. The Mississippi River Heritage Project is a technology-rich, multi-disciplinary program designed to teach students about the Mississippi River.

The content for these projects has been specifically developed by a team of curriculum experts in the areas of science, mathematics, social studies, and language arts.

The content for these projects has been specifically developed by a team of curriculum experts in the areas of science, mathematics, social studies, and language arts.

Earth Trails: Loess CD ROM...

Earth Trails: Loess is a reality-based exploratory computer program that uses the analogy of a field trip to the wetland, woodland, and prairie environments of the Loess Hills of Iowa. Students navigate through the lodge building and nature trails of a virtual camp in the Loess Hills while gathering sounds, images, and information with the tools provided to them. The program is centered on the completion of 17 instructional tasks. In order to complete a task, students must provide a written response to each question and include a sound or an image brought back from the trails. In addition, a quiz-like challenge section is included in the program as an optional objective learning exercise. Each challenge item is designed to work in conjunction with the tasks, or as a stand-alone learning activity.

Students may also expand upon their knowledge through a set of classroom activities. These activities require the use of other resources, such as books, magazines, hands-on experiments, and the Internet. The activities integrate different curricula and were designed to meet many of the National Science Education Standards for grades 5-8 and include the benchmarks defined by the American Association for the Advancement of Science.

Earth Trails: Loess is the first of a series of interactive programs developed by IPTV InteractiveMedia funded in part by a Star Schools grant from the U.S. Department of Education. The CD-ROM - based multimedia program is available for both Macintosh and Windows operating systems.

Make sure you bookmark our site for further information on this and other projects being developed by IPTV InteractiveMedia. In the future, this site will also include additional resources, program updates, and student generated projects related to the Earth Trails: Loess project.

Your comments, suggestions, and questions will always be welcomed.

Gallery...

Sorry, no text here, just images and video clips!

Resources...

Work in progress...Check back soon.

Contact Us...

The staff of IPTV InteractiveMedia would like to hear from you.

The most efficient way of contacting us is via email at interactive@iptv.org

The subject line of your message can help us route your message more effectively. For example, if you are contacting us regarding the Earth Trails: Loess CD-ROM, include the words Earth Trails: Loess in the subject line of your message. If your message is about the Mississippi River Heritage Project, include the word Mississippi in the subject line.

Educational Want Ad Format:
Date Entered
Topic
Ad with contact name and phone number

- Current Want Ads: 31
- Last Addition: 12/2/97

Educational Want Ads are listed in alphabetical order by topic

---

12-2-97
Spanish Experience --- IMMEDIATE RESPONSE NEEDED
The Charles City Community Schools Spanish program is hosting an intercambio group from Mexico City of ten students and their teacher from December 12 to 17 and as part of the experience, is pleased to invite any Spanish program to talk with them LIVE over the Iowa Communications Network on the 15th or 17th. Please contact Al Bode (515-257-6510) to set up a time between 8:30 and 11:00 or between 11:30 and 3:00 on either day and join the session. Your students can ask these visitors about Mexico, its culture, lifestyles, holiday celebrations, etc. We hope you can join the program.

10-8-97
The School Improvement Sub Committee on Student Expectations is looking for information from schools (especially of about 2,000) who are using or have used a faculty advisor for small groups of students (homerooms?) to meet individually with each student and his/her signifigant adult(s) to make a 4 year plan to make HS graduation a useful step toward a career, college etc. We hope someone has an on-going curriculum that has been used with the groups to facilitate student participation in the planning process. Contact Bobbie Swanson, Muscatine High School, 319-263-6141.

3-12-97
Advanced Math
South Tama Community School District: Teacher Jim Walker is willing to teach on the ICN the following post-secondary enrollment math courses that offer college credit through Marshalltown Community College:
Spring 1998 - Pre-Calculus and/or Calculus
South Tama is on the block system, and these classes are offered Monday through Friday from 8:30AM to 10:00 AM.
Contact Jim at South Tama High School, 515/484-4345.1-3-97

6-4-97
Advanced Placement Calculus
Advanced Placement Calculus will be offered 1997-1998 school year (both semesters), 9:00-9:50 a.m., Monday through Friday, from Cedar Falls High School. For more information, contact Dean Dreyer, 277-3100, dreyerd@cedar-falls.k12.ia.us

10-31-97
AP History
East Buchanan High School is interested in receiving an AP History class for about 6 High School juniors and seniors, spring semester 1998. Contact Gwen Schaeffer at 319/935-3367.

All ICN Users
Iowa's Star Schools Project is providing an opportunity for all schools to participate in interactive distance

learning demonstration sessions. The project aims to provide a wide variety of worthwhile learning experiences while demonstrating the interactive network to new users--presenters, educators and students. Sessions are now being planned for Spring 1998. Your suggestions for future activities would be welcome. Contact Jennifer Townsend, IPTV, 800-532-1290 or 515-242-6283.

10-20-97
Anatomy
Sumner High School is looking to receive an Anatomy Class during the 98-99 school year. If interested contact Fred Kinne, Principal. School phone 319-578-3342 or at kinne@sbt.net.

10-14-96
Animal Welfare I
Veterinarian Dr. Mark Schmidt talks about responsible pet ownership, pet care and the veterinary profession. He tailors his presentation to be appropriate to any audience. Contact Dr. Schmidt at 515-276-4549.

10-14-96
Animal Welfare II
1. Classroom presentation -- animal welfare considerations -- delivered in an age-appropriate and humorous manner. 2. Teacher Program -- free supplementary materials are available for teachers to incorporate into teaching humane education. Contact the Animal Rescue League of Iowa, 515-262-9503.

10-14-96
Celebrating the Magic of Music
The Pioneer String Quartet of the Des Moines Symphony offers a variety of programs for grades 1-6, and junior and senior high school string players. Contact Education Coordinator, Des Moines Symphony, 515-243-1140.

10-14-96
Creepy Crawlies
What makes an insect an insect? This lively presentation encourages students to learn about the characteristics and adaptations of these tiny animals. Slides, insect costume, and hands-on materials make this a valuable learning experience. Grades 3 / 4. Contact Blank Park Zoo, Educational Coordinator, 515-285-4722.

9-9-97
8th Grade Activity
Wanted: 8th grade class to share Johnny Tremain novel around Nov.Dec 1997 time period. We begin the novel about Nov.1. We can share class discussions, projects, etc. via ICN. Kuemper 8th grade does this novel through Reading and Soc. Studies classes.Other possibilities with us are Roots; or for next May- Across 5 Aprils. Contact John Steffes, Kuemper Catholic School, PO Box 827, Carroll, IA 51401 (712)792-8071

SPRING 1998
41:130 **Principles of Economics I** Tues/Thurs 7:00-8:15 a.m.
Analysis of the fundamental concepts and principles of our economic system centering on production, price, natural income, fiscal policy, money, and banking. Prerequisite: 1 year high school algebra, geometry recommended.
Contact: Kim Cox, Distance Learning/Title III, Graceland College, voice:
515-784-5324, e-mail: kcox@graceland.edu

10-9-97
English
Harmony H.S. at Farmington is looking for a 10th grade level English course for the '97/98 second semester starting in January. Please respond to Dave Stammeyer at 319-592-3192 or E-mail Becky Bedford at "bbedford@ott1.ihcc.cc.ia.us".

4-21-97
English Composition

SPRING 1998 SEMESTER
Spring 1998 --- LDRS:101:03 English Composition I -- Introduction to the writing process. Pre-writing, drafting, revision, with attention to audience, purpose, thesis formation, supporting materials, and organization. Analysis of students' writing and that of others. William Penn College -- Sherry Lippert -- 7:00-8:15 a.m., Tu & Th.
Contact: Jim Knutson, 515-673-1096, knutsonj@wmpenn.edu

10-20-97
Foreign Language Classes Exchange
Sumner High School is willing to trade a Spanish I class for French I, Russian or Japanesse for the 1998-99 school year. If interested contact Fred Kinne, Principal. School phone 319-578-3342, or at kinne@sbt.net.

10-22-97
French
St Albert HS would like to receive a French class beginning this school year. Please contact Marilyn Wandersee at 712-328-2316.

11-12-97
French II
Benton Community High School would like to receive a French II class. Contact high school counselor, Jo Prusha, at 319-228-8701 ext. 354. Benton HS has block scheduling.

10-14-96
Geology-Devonian Fossils
Students take part in a collaborative geology class centered on the Devonian deposits and fossils of the Rockford quarry, and use multimedia to present information and findings. Suitable for 5/6th with 11/12th grade. ICN instruction time shared by all students. Microfossil kits are available, or joint field trip to the quarry. Contact Ron Frank, Rockwell-Swaledale CSD, 515-822-3234.

4-21-97
History
SPRING 1998 SEMESTER
Spring 1998 -- HIST:199:01 World History Since 1500 -- Rise of "modernity" in Western Civilization -- popular sovereignty, science, industrialism, private enterprise, mass society, and overseas expansion. Follows histories of East Asia, India, the Middle East, Africa, and the Americas to see how their unique circumstances have conditioned their response to the impact of modernity. William Penn College -- Dr. Silvano Wueschner -- 7:00-8:15 a.m., M & W.
Contact Jim Knutson, 515-673-1096, knutsonj@wmpenn.edu

Iowa History
The fifth grade teachers of the Rudd, Rockford, Marble Rock Elementary School are interested in ways to make Iowa History Class come alive. One way might be to visit various sites in Iowa, conduct interviews with Iowans, and share information between schools via Internet regularly and ICN when appropriate. If interested, contact Larry L. Hicok, Elementary Principal, 515-756-3508 or rrmradmin@netins.net

7-9-97
Latin
Youth for Understanding-International Exchange is looking for schools, colleges, or universities that would be willing to offer Latin classes over the ICN. Foreign exchange students placed through out Iowa by this group often need Latin to satisfy educational requirements in their home country. If you would be interested in offering Latin or in collaborating to hire a Latin instructor, contact Diana Weesner at 515-276-6301.

9-17-97
Music Theory
Wellsburg-Steamboat Rock School District is interested in receiving a Music Theory class for second semester of this school year. Contact High School Principal Bob Hutchcroft, WSR Schools, 609 S. Monroe Street,

Wellsburg, IA 50680. Phone 515.869.5121. E-mail b_hutchcroft@po-1.wellsburg.k12.ia.us

10-22-97
Old West Study
Lewis Central High School is looking for partners to study the Old West. Class will run from Dec 1, 1997 to March 5, 1998. We are also looking for some good ideas on the topic. Contact Dick Bleth at 712-366-8222 or 712-566-2527 (home).

5-13-97
Pre-Calculus & Calculus
Pre-Calculus High School credit course, offered January 19-March 24, 1998 from 8:30 to 10:00 AM. Calculus High School credit course, offered March 25-May 29, 1998 from 8:30 to 10:00 AM. Both classes taught on the ICN for the third year by Jim Walker, South Tama High School. If your school would like to join this class, call Mr. Walker or Mr. Steven Burr, Principal, So. Tama High School (515)484-4345.

11-14-97
Psychology
Is anyone offering a high school level Psychology course? Sumner High School is very interested in receiving a course, spring of 98 and/or during the 98-99 school year. Please contact Fred Kinne, Principal at 319-578-3342 or kinne@sbt.net.

4-21-97
Psychology
SPRING 1998 SEMESTER
PSYC:102:01 Introduction to Psychology -- Introductory psychology with units in learning, human development, problem solving, perception, emotion, motivation, personality, social behavior, behavior disorders, and therapy. William Penn College -- Dr. Silvano Wueschner -- 7:00-8:15 a.m., Tu & Th
Contact Jim Knutson, 515-673-1096, knutsonj@wmpenn.edu

10-14-96
Science Careers for Women
ISU's Program for Women in Science and Engineering is interested in hosting discussion sessions with professional women mentors and student models. Sessions are tailored for grade appropriateness. Contact the Program for Women in Science and Engineering, ISU, 515-294-8627.

7-11-97
Spanish - College Level
Students in Northwest Iowa are interested in receiving college level Spanish for Fall and Spring Semesters '97-'98. Please contact Colette Scott at Northwest Iowa Community College #1-800-352-4907 X182.

9-9-97
Spanish - Conversational Spanish Exchange
Teacher at Clarinda High School would like to collaborate with other schools offerring a Spanish 4 class to exchange conversational materials and to discuss current events in Spanish. Contact Clara Carden, Clarinda High School, e-mail: clarac@clarinda.heartland.net

SPRING 1998
38:120 **Introduction to Speech** Mon/Wed/Fri 12:45-1:35 p.m.
Introductory course in speech communication exploring the principles of communication theory and techniques for interpersonal communication, group discussion, and public speaking.

Back to Ed Want Ads Main Page

Summary of Project Sponsored K-12 Distance Learning Demonstration Sessions 96-97

Event	# ICN Sites	# Student Participants	Grade Level
Worlds of music	6	175	1st-6th
Animal Welfare	6	175	1st-6th
Mozart's Friends	4	100	1st-6th
Pioneer String Quartet	11	279	1st-6th
Animal Rescue League	5	124	2nd
Dino-mite	10	273	2nd-3rd
Living History Farms	4	87	2nd-6th
Creepy Crawlie	4	107	3rd-4th
Dear Mr.President	5	138	4th-5th
Theory of WOW	22	785	4th-6th
Total Elementary Level	**77**	**2243**	
Women in Science	6	170	5th-8th
Sayorville Field Trip	6	154	6th-12th
Wildlife Refuge Field Trip	50	1250	6th-12th
Rockford Quarry	2	130	6th-12th
Colors of Music through Bowing	4	60	6th-12th
Pioneer String Quartet	4	68	6th-12th
Fingerprinting	6	150	5th-8th
Extraction	6	150	9th-12th
National Weather Service 2	6	144	8th
National Weather Service 1	4	73	9th
Joslyn Art Gallery	13	285	9th-12th
Total Middle or High School Level	**107**	**2634**	
Fair Use Guidelines	35	92	Staff Dev.
History Trunk	27	27	Staff Dev.
Kids are Alright Rock and Roll	24	240	Staff Dev.
Media Literacy	16	47	Staff Dev.
Planning for Ed. Tech.	79	107	Staff Dev.
Total Staff Development	**181**	**513**	
TOTAL	**365**	**5390**	

Description of Project Sponsored Instructional Activities

Live Video Field Trips

Iowa Public Television has been carrying out a series of experimental electronic field trips to evaluate ways of using different combinations of fiber optic and other communications technologies. To date, three field trips have been completed.

Saylorville Gorge

In October 1996, Saylorville gorge near Johnston, Iowa, was the site of the first video field trip experiment. Kelly Loreth, park ranger for the Army Corps of Engineers, took students from six Iowa schools on an instructive trip through seven geological ages - the equivalent of 300 million years. Kelly's enthusiastic, interactive delivery and thoroughly prepared materials, combined with lively students and a nearly flawless transmission to make the event an inspiring success.

The tour of the gorge used several technologies. An IPTV videographer followed Kelly through the 75 minute event, capturing the surroundings as well as all the geological details. Attached to the camera was a microwave transmitter, which through a series of relays sent the audio and video signals to the 2000' IPTV transmission tower at Alleman, Iowa. From the tower, the signal traveled over the Iowa Communications Network (ICN) fiber optic cable to IPTV in Johnston where it was fed to one of the interactive classrooms.

Jennifer Townsend, who is coordinating the project, served as facilitator in the classroom, used the touchscreen to switch the video between Kelly, graphics, VCR and the classrooms. Questions from the students in the session were heard by Kelly via a wireless phone patched into the system through an audio bridge.

The excitement in the participating classrooms was evident by the level and rapidity of the questions Kelly fielded from the students, who were a mixture of 6th through 12th graders. Ron Frank, high school science teacher at Rockwell-Swaledale schools in northern Iowa, and no stranger to the ICN or fossils, called the event incredible. He commented, "What new possibilities are now open for us to use with the ICN."

Students from North Polk junior/senior high school took part in the field trip from the IPTV classroom in Johnston, a short bus ride from their school. Other classes were located in (distance from Saylorville in parenthesis): Charles City (140mi), Rock Rapids (190mi) Humbolt (180mi), Britt (200mi), and Mason City (200mi).

Living History Farms

A second field trip, in late October 1996, took students to the 1850s Pioneer Farm at Living History Farms (LHF) in Urbandale, Iowa. Dan Jones, education coordinator at LHF, guided students at four remote ICN sites around the Pioneer farm, and focused on some of the tasks that people living in that era would have been accustomed to do, such as using animals to work the soil, raising and caring for animals, and domestic duties such as cooking to carding and spinning wool for clothing.

On this occasion satellite transmission was fed into the fiber optic network. The videographer, with a 400 ft, cable between his camera and a satellite truck, followed closely what was being demonstrated and produced exceptional close-up shots. A satellite truck, contracted from the University of Northern Iowa, uplinked the signals, which were then downlinked at IPTV in

Johnston and fed into the fiber optic network. A wireless cellphone provided student communications with the host. Participating schools were located in Cylinder (125 miles from Urbandale), Oelwein (150mi), Peosta (170mi), and Wheatland (170mi).

DeSoto National Wildlife Refuge

DeSoto National Wildlife Refuge (DNWR) on the Missouri River was the location for the third experimental live interactive field trip, carried out in November 1996. In addition to distribution over the Iowa Communications Network (ICN), fifteen minutes of the 75 minute event were broadcast live over IPTV.

Dr. Bruce Weber, DNWR visitor center manager, hosted the session. The location was chosen because of the unique opportunity for Iowa students to witness the migration of snow geese which stop off on the Missouri en route from their Arctic nesting grounds to Gulf coast wintering areas. At their peak some 500,000 snow geese are at the refuge during a few short weeks in late fall. Among the topics covered by the DNRW staff were migration, feeding habits, and predators. Despite the misty conditions, students saw great shots of thousands of geese, as well as bald eagles and other water fowl.

The field trip included a tour of the riverboat Bertand exhibit in the refuge visitors' center. The Bertrand was a supply boat which sank in the Missouri River in 1865 on its way north to mining towns in Montana. Its excavation in the late 1960s revealed almost its entire cargo, but none of the mercury it was thought to be carrying. The curator showed students examples of glassware, china, canned goods, pocket knives, cannon balls, hardware and clothing, all of which had been meticulously restored to nearly their original condition.

Satellite technology was again used to transmit the video signal from the DNWF visitors' center to IPTV in Johnston, where it was put on the ICN. Student responses were returned to the presenters via a wireless phone connection. While this was the same technology successfully employed for a previous field trip, the decision to include a fifteen minute broadcast segment, and nearly 50 remote ICN classrooms presented new complications and challenges. Subsequently, IPTV engineers have developed a way to integrate two simultaneous ICN sessions, which very effectively overcomes the disadvantages of having large numbers of sites participating in an event, without compromising the program's continuity by frequent or unregulated interruptions.

K-12 Distance Learning Demonstration Projects

Animal Welfare I and II

Animal Welfare I concentrates on responsible pet ownership. Students talk about responsibilities of pet ownership and see radiographs of various medical conditions in animals. Animal Welfare II includes brainstorming about the needs of pets, information about pet populations, grooming, exercise, and identification of animals.

Creepy Crawlies

This program covers the characteristics and adaptations of the world's most prolific animals. What makes an insect and I nsect? This lively presentation encourages students to learn about the characteristics and adaptations of these tiny animals. Slides, insects, costume insects, and hands-on materials make this a valuable learning experience.

Devonian Geology

This collaborative geology class centers on the Devonian depositis and fossils of the Rockford, IA quarry. Middle school students are matched with high school students as they help each other learn. Micro-fossil kits are available, or a joint field trip to the quarry to collect specimens.

Dear Mr. President

Presented by the Herbert Hoover Presidential Library featuring materials from the library's collection.

Dino-Mite

This program is sponsored by the Science Center of Iowa. Students learn about fossils and the theories about why dinosaurs became extinct.

Kids are Alright Rock and Roll

Popular music exerts a powerful influence, not only on youth, but on American culture as a whole. But does it have a place in the clasroom. Discover why and how rock and roll from the music of the 50s to the alternative rock and rap of today can be a legitimate, effective teaching tool.

Media Literacy: The New Basic

Hosted by Richard W. Riley, US Secretary of Education , and moderated by John Merrow, the live and interactive videoconference will feature national and international media education leaders as well as students and teachers involved in exemplary media education efforts.

National Weather Service

Weather Spotter and Weather Ed are two of the programs designed for middle and high school students.

Planning For Educational Technology

Case studies will illustrate successful planning and implementation, including problems encountered and overcome. Recent research will help identify what works educationally, and what does not. And sound business principles for technology acquisition and support will provide the framework you need to manage ed-tech successfully.

Pioneer String Quartet

Three separate sessions presented by the Pioneer String Quartet of the Des Moines Symphony Orchestra. Sessions include Mozart's Friends, Color of Music through Bowing, and Worlds of Music. These instrumental programs are entertaining and informative and provide an initial exposure to orchestral music.

Science Careers for Women

Discussion sessions with Professional women mentors and student models. This program includes grade appropriate discussion sessions encouraging girls to consider science, math and engineering careers.

Description of Future Project Sponsored Instructional Activities

Live Video Field Trips

Live! Field Trip to NASA

Four NASA engineers are currently living inside a sealed, three-story tall, 20 diameter pressure chamber located at NASA's Johnson Space Center as a part of the Lunar-Mars Life Support Test Project. This virtual interaction will take Iowa students inside the sealed chamber to visit with these engineers and find out what they are doing to live in this environment and why it is important for future space exploration.

The Hoover Presidential Library

Take a virtual field trip to the Hoover Presidential Library-Museum via the Iowa Communications Network. We invite you to visit the museum dedicated to the 31st President of the United States and learn about the Great Humanitarian's life and times. You'll get a glimpse of West Branch in the 1870s, be transported to a mining camp in the Australian Outback, visit Tientsin, China during the Boxer Rebellion, experience a Belgian relief warehouse, and attend President Hoover's inauguration on March 4, 1929. We will use documents, photos from the family albums, home movies taken by Mrs. Hoover, videos, newsreel clips of Herbert Hoover, and artifacts to make the visit interesting and meaningful.

The Herbert Hoover National Historic Site

The Hoover Presidential Library offers teachers and students a virtual trip through the White House via the Iowa Communications Network. We invite you to come inside the most famous home in the United States and see and learn more about life at 1600 Pennsylvania Avenue, both past and present. Like most big old houses, the White House has stories to tell about the people who lived there and the special events that happened there. To help us on the tour we will use a special book about the White House furnishings written by Iowa's own Lou Henry Hoover in 1932. We will use this rare manuscript along with photos, videos, artifacts, letters and documents to make the White House come alive on the ICN!

Inside the White House

The Hoover Presidential Library offers teachers and students a virtual trip through the White House via the Iowa Communications Network. We invite you to come inside the most famous home in the United States and see and learn more about life at 1600 Pennsylvania Avenue, both past and present. Like most big old houses, the White House has stories to tell about the people who lived there and the special events that happened there. To help us on the tour we will use a special book about the White House furnishings written by Iowa's own Lou Henry Hoover in 1932. We will use this rare manuscript along with photos, videos, artifacts, letters and documents to make the White House come alive on the ICN!

K-12 Distance Learning Demonstration Projects

The Heavens Above: New Technologies in Astronomy

Kris Mandsager, who teaches astronomy at North Iowa Area Community College, will demonstrate some new technologies for studying images from space. He will introduce students to telescopes with CCD cameras (charge-coupled devices) with which he has filmed recent astronomical events, such as the Hale-Bopp comet. He will also describe other more modest equipment that schools can use in astronomy classes, including the University of Iowa's automated telescope, avail-
able to Internet users.

Chamber Music Master Class

The Colorado Quartet is an award winning musical group based in the New York area and will be in residence at the University of Iowa during the fall of 1997. Schools are invited to attend this master class over the distance learning network- the ICN -live from the Hancher Auditorium. One or two student quartets will be invited to participate.

Meet the Author: Ralph Moisa

Ralph Moisa is a descendant of the Yaqui Nation and author of *Great Eagle and Small One,* and *Little Fish.** Mr. Moisa will talk to students about aspects of Indian heritage, history, culture and diversity, with a demonstration of teepee building, and Indian dancing and singing. Many tribal artifacts, tools and ceremonial wear will be shown.

Getting your Foot in the Door

A panel of human resources managers will help students and counselors through the complicated processes of job application forms, writing an effective resume, as well as some interviewing techniques. Students will benefit from their advice on what makes a good employee, how the working world differs from school, and an employer's expectations of their staff - all invaluable preparation for young people entering the working environment.

Biotechnology

Biotechnology classes: DNA fingerprinting Lab simulation for high schools called "Which Dog Did it?" and a DNA extraction lab for middle schools.

Thomas Jefferson and the American Revolution

President Jefferson is portrayed by respected scholar Clay Jenkinson. Mr. Jenkinson is one or the foremost interpreters of Thomas Jefferson and a founder of the modern chautauqua movement. In recent years, his in-character portrayals of Thomas Jefferson have entertained and educated fourth graders, Supreme Court justices, members of Congress, and hundreds of other groups throughout the nation. His method is to stay resolutely in character, but to permit Mr. Jefferson to comment carefully on a world he did not live to see. He speaks as Jefferson, dresses and interprets issues as Jefferson may have. "I try to project the eighteenth century conditions, circumstances, issues and problems," he said. "I try not to lock Jefferson into his revolutionary era views but I try never to let go of an historical tether to that time and place."

ICN SCHEDULING INFORMATION

ICN MAIN MENU

Site Availability

Daily Schedules

Reservations

Search Reservations

Request Reservation

Site Billing Report

ICN Schedulers Information

SITE AVAILABILITY

Select a Region or enter a Site ID. Leaving region as -ALL- and leaving site blank will check all sites statewide.

REGION : [-ALL-] SITE : [ ] **NEW**If you know the node id of the site you wish to check, enter it in the box provided and continue with the rest of the form. If you want to select from a list of sites you must click the Update Site List by Region button. To display only sites in your region, first select the region from the list above, then click the Update Site List by Region button. To see all sites statewide, leave the region as -ALL-, then click the Update Site List by Region button.

START DATE: [ ] (mmddyy) END DATE: [ ] (mmddyy)

START TIME: [ ] (hhmi) END TIME: [ ] (hhmi)

SUNDAY MONDAY TUESDAY WEDNESDAY
THURSDAY FRIDAY SATURDAY

Region Map

Return To Main Menu

DAILY SCHEDULES

Select a Region or enter a Site ID. Leaving region as -ALL- and leaving site blank will check all sites statewide.

REGION : [-ALL-] SITE : [ ] **NEW**If you know the node id of the site you wish to check, enter it in the box provided and continue with the rest of the form. If you want to select from a list of sites you must click the Update Site List by Region button. To display only sites in your region, first select the region from the list above, then click the Update Site List by Region button. To see all sites statewide, leave the region as -ALL-, then click the Update Site List by Region button.

Status:	ALL	ADVANCE	ADV APPROVED
	REQUEST	COMMITTED	VALIDATED
	WAITING FOR APPROVAL	CANCELLED	

START DATE: [ ] (mmddyy) END DATE: [ ] (mmddyy)

Region Map

Return To Main Menu

NEW RESERVATION

Web ID: _____

Password: _____

To submit a new request- Enter Web ID and Password then Click

To register as a new user- Click

To view your reservations- Enter Web ID and Password then Click

****NEW****

For assistance, click on the regional scheduler for your region to send an e-mail

Region 1 Scheduler - Region 1
Region 2 Scheduler - Region 2
Region 3 Scheduler - Region 3
Region 4 Scheduler - Region 4
Region 5 Scheduler - Region 5
Region 6 Scheduler - Region 6
Region 7 Scheduler - Region 7
Region 9 Scheduler - Region 9
Region 10 Scheduler - Region 10
Region 11 Scheduler - Region 11
Region 12 Scheduler - Region 12
Region 13 Scheduler - Region 13
Region 14 Scheduler - Region 14
Region 15 Scheduler - Region 15
Region 16 Scheduler - Region 16
National Guard Scheduler - Region 19
Des Moines Public Schools - Region 22
IDPH Scheduler - Region 23
Dept/Econ Dev Scheduler - Region 24
State Library Scheduler - Region 25
ISU Scheduler - Region 50
UNI Scheduler - Region 51
U of Iowa Scheduler - Region 52
Drake Scheduler - Region 53
Graceland Scheduler - Region 54
Wartburg Scheduler - Region 55
Luther Scheduler - Region 56
Buena Vista Scheduler - Region 57
St Ambrose Scheduler - Region 58
Mt Mercy Scheduler - Region 59
Allen College - Region 60
U of I Hospitals - Region 61
Northwestern College - Region 62
ICN - Region 74
Patty Oswald - Region 75
Julie Johnson - Region 76
National Guard (North Central) - Region 77

SEARCH RESERVATIONS

TOPIC : -ALL- AUDIENCE :
-ALL-

START DATE: (mmddyy) END DATE: (mmddyy)

Return To Main Menu

iowa database

A Resource for Distance Education

http://www.iptv.org/iowa_database/

Classroom Information

Click on the map to see ICN site information including address, contact person, and classroom enhancements.

Online Scheduling

Cisco on the Web offers users the ability to schedule an ICN classroom, check on site availability, daily schedule, and search scheduled events.

Video Clips Movies

View VDO and QuickTim movies demonstrating uses of Iowa's statewide fiber optic network.

Educational Want Ads

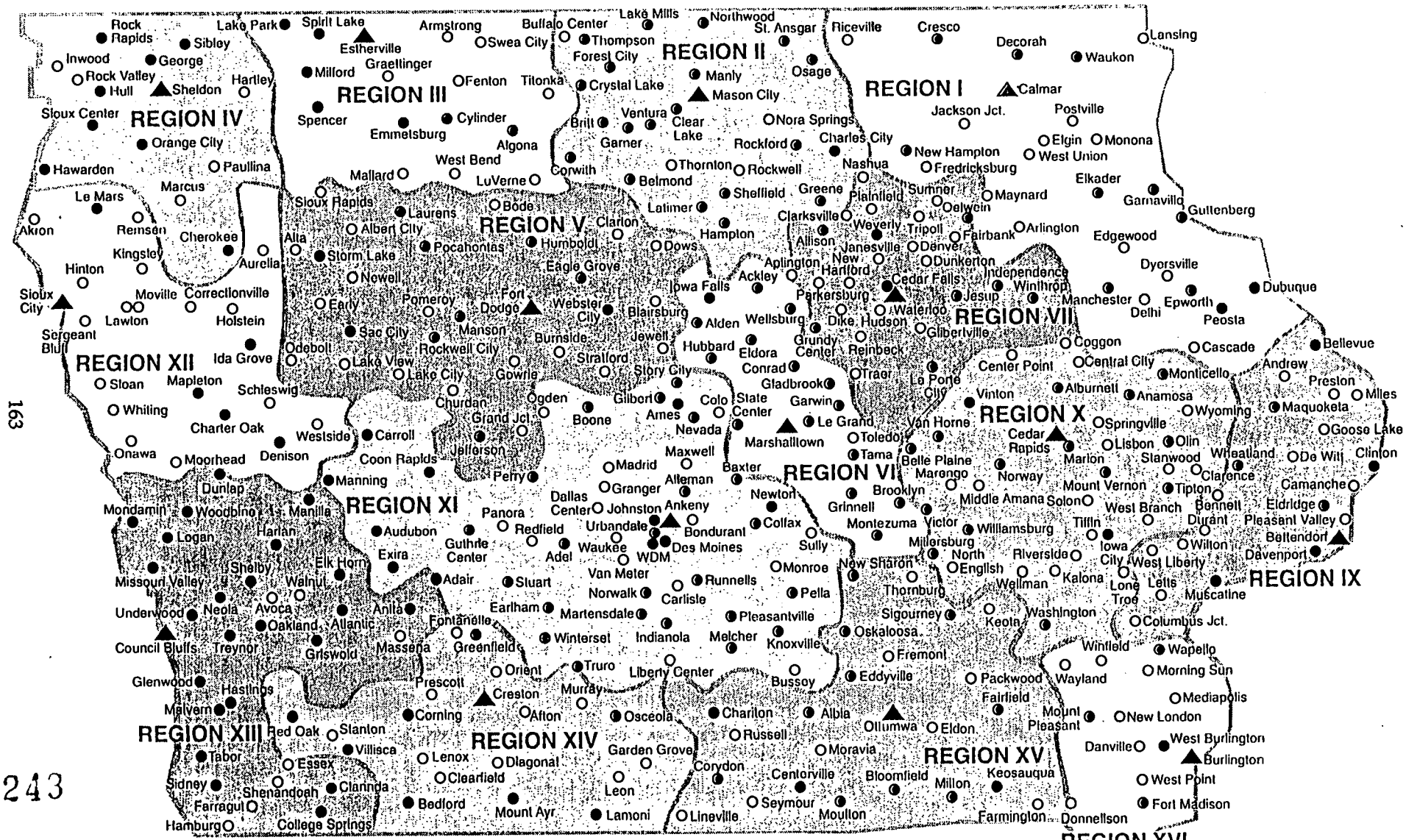
Post a want ad on the Iowa Database to make valuable contacts for originating or receiving ICN programming.

"World of Education" Links

Updated monthly, the Iowa Database features links to innovative educational web sites.

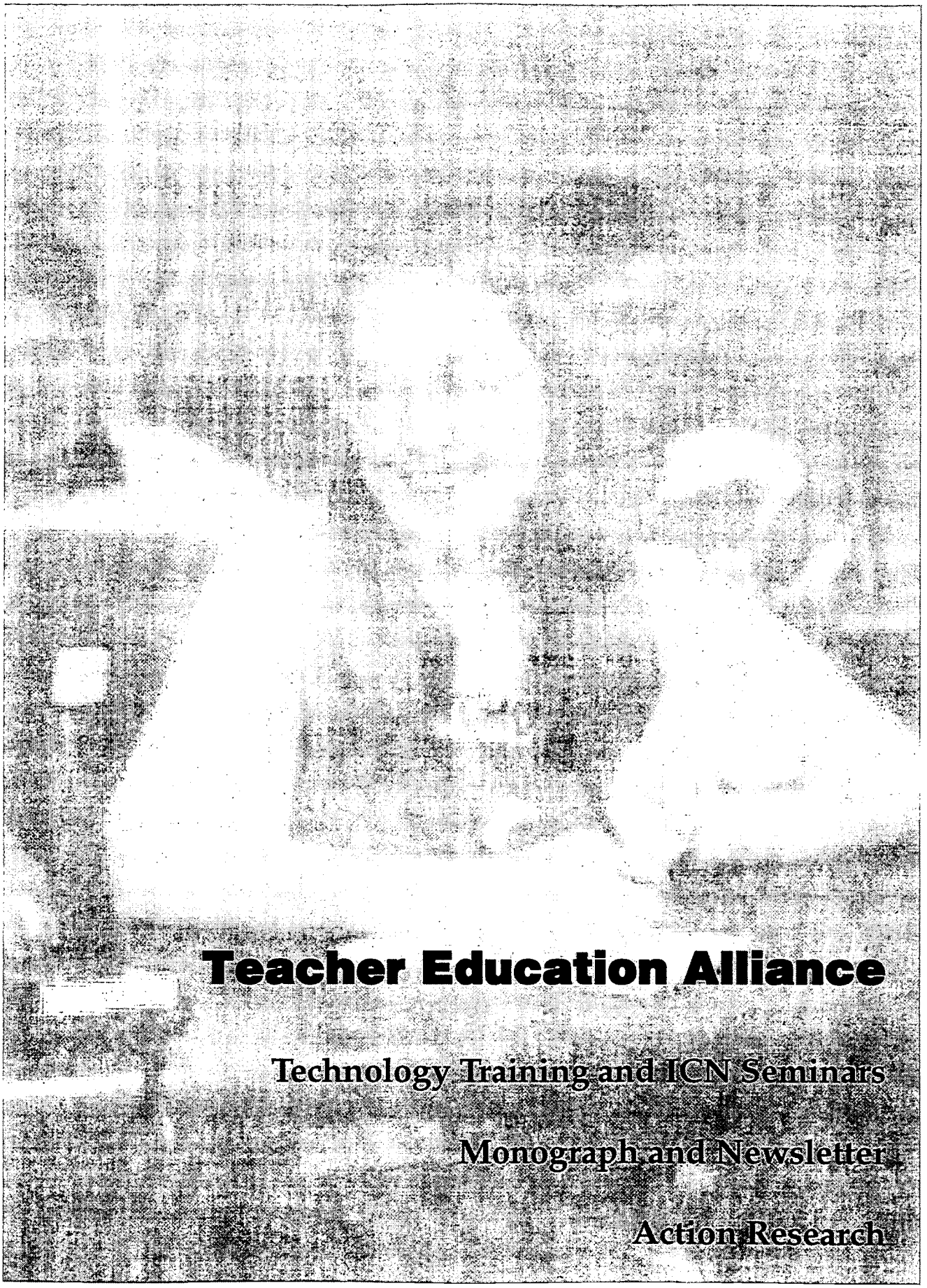
Printed with funds from
USDE Star Schools Grant
gram #R203F50001-96

Educational Sites on the Iowa Communications Network



* The Iowa Communications Network also includes additional administrative sites at the following: Iowa National Guard, state and federal agencies, libraries, and hospitals.

Version 4/1/97



Preservice Teacher Education

Goal 5: Support will be provided for distance education training needs of preservice programs in colleges and departments of teacher education in Iowa's public and independent universities and colleges.

Objectives related to this goal include:

1. coordinating technology training among the Iowa teacher preparation colleges and universities,
2. providing ICN seminars for faculty of teacher education programs,
3. developing an updated monograph on distance education literature,
4. producing a newsletter dealing with preservice teacher education and distance education,
5. funding 15 action research studies that deal with the implementation and practice of distance education in Iowa, and
6. publishing an updated Encyclopedia of Research on Distance Education in Iowa.

Materials, tables, and charts related to preservice teacher education are located at the end of this section.

Technology Training and ICN Seminars

Iowa teacher education faculty and administrators attended a nationwide live satellite forum to discuss "Attracting and Preparing Teachers for the 21st Century." Teacher education faculty were also invited to attend a meeting to discuss distance education at their institution, including the problems encountered, problems solved, and other issues of concern. ICN seminars were held for one private college to discuss distance education and the ICN. Two instructional videos were produced: one profiled the three Star Schools statewide networks, the other outlined cost factors for distance education systems.

Accountability

- Participation in the live satellite forum "Attracting and Preparing Teachers for the 21st Century" was facilitated by the Teacher Education Alliance (TEA).
- TEA representatives at 30 Iowa colleges and universities were invited to represent their institutions at the annual IDLA (Iowa Distance Learning Association) Conference in February of 1997 at the expense of the TEA.
- One faculty member at each of Iowa's colleges and universities has agreed to be the contact person for issues related to teacher education and distance education.
- Two ICN sessions were held for teacher education students at Simpson College
- A total of 70 Simpson students participated in the ICN seminars.
- A 14-minute video titled Star Schools: Three Statewide Approaches was produced as part of the *Foundations and Applications of Distance Education* series. The video discussed the distance education approaches of the three statewide Star Schools networks: Iowa, Mississippi, and Kentucky. Costs for the video production were shared among the three states.
- A twelve-minute video titled Costs of Distance Education Systems was also produced as part of the *Foundations and Applications of Distance Education* series. The video is intended to help sort through the complicated issues related to distance education infrastructure for those considering adding distance education to their curriculum.

Effectiveness

- Three institutions participated in the live satellite forum. More institutions expressed interest in the forum, but many faced scheduling conflicts due to the short advance notice of the event.
- Fourteen TEA representatives attended the IDLA conference.
- Eleven TEA representatives attended the TEA meeting.
- Seventeen TEA representatives responded to a phone survey to evaluate the Iowa Distance Education Alliance (IDEA).
- Additional ICN seminars for 1997-98 have been requested because of the success of the first.
- Thirty copies of the video Star Schools: Three Statewide Approaches have been made. Ten were distributed to each participating state. Additional copies will be made as needed.
- Twenty-five copies of Costs of Distance Education Systems were made. Additional copies will be made as needed.

Impact

- Of the 17 TEA representatives responding to a phone survey, five indicated there was no faculty involvement with distance education at their institution.
- Ten TEA representatives indicated there was at least some faculty involvement in distance education at their institution.

  "Two that teach (via distance education) regularly."
  "Less than 10% use it."
- Six of those representatives indicated at least moderate faculty involvement with distance education at their institution:

  "Lots of activity -- several master's programs on the ICN, activity extensive in education studies, a number of faculty active outside education studies."
  "We used training sessions from UNI, and four departments offer courses using the ICN."
  "Last year faculty in general taught two courses in distance education. They have offered quite a few 'how-to' distance education courses, such as 'how to make a web page.'"
- The videos received positive reviews. Impact will be assessed by the number of requests for the videos that are received.

Monograph and Newsletter

The second edition of the monograph on distance education literature was published in July, 1996. The newsletter for the Teacher Education Alliance and the Iowa Distance Education Alliance (TEA Times) provided timely information for educators and others on research and issues related to distance education.

Accountability

- Five issues of *Tea Times* have been distributed to approximately 2500 educators across the state.
- The newsletter is sent to K-12 teachers, teacher education faculty, regional coordinators, and others.
- The updated monograph on distance education literature was published in July, 1996.

Effectiveness

- The *TEA Times* mailing list database has increased by approximately 1200 since last year.
- 450 monographs were printed.

Impact

- 407 copies of the monograph were distributed.
- AECT will handle publication of the monograph in the future.

- Requests for the monograph for use in university classrooms have been received from within Iowa and outside the state.

Action Research

Nine research proposals were funded to study distance education in Iowa. Each grant recipient was awarded $750 upon completion of the research.

Accountability

- An RFP was distributed in November 1996, and again in February of 1997, asking for research proposals dealing with distance education in Iowa.
- The RFP was distributed in a variety of ways in an effort to reach a large audience: it was included in two issues of TEA Times, available on the IOWA Database, and mailed to all Iowa AEAs, community colleges, and universities.
- Final reports on the research will be included in an encyclopedia of distance education research as projects are completed.

Effectiveness

- Nine proposals were received, and all nine were funded.
- Five completed research reports were received by the deadline stated in the RFP, four researchers requested extensions.
- Requests for the current encyclopedia indicate that the resource is useful.
- A total of 150 encyclopedias were printed (Second Edition and Revised Edition)

Impact

- Four requests for RFPs were made before the RFP was available.
- 141 encyclopedias were distributed in Iowa (Second Edition and Revised Edition)
- Requests for the encyclopedia were received from people and institutions from outside Iowa.

Technology Training

Flier: Attracting and Preparing Teachers for the 21st Century
Summary: TEA Activities at the IDLA Conference
TEA Sponsored IDLA Conference Attendees
TEA Representative Correspondence
Survey: TEA Representatives
Summary: TEA Representative Survey
Script: TEA Phone Survey
Summary: TEA Phone Survey

Are teachers prepared for the classroom?
Tell us what you think!

A National Forum: Attracting and Preparing Teachers for the 21st Century

Thursday, April 17th at 8:00 p.m. - 9:00 p.m.

Join a national discussion on how schools, colleges, and communities can assure that all teachers have the preparation they need to teach effectively in today's classrooms.

Your community's teachers, education students, professors, college administrators, principals, school boards, policy makers and others have a special opportunity to get together and discuss ways that your schools and others around the country can avoid the frustration that new teachers feel when they are not adequately prepared. This thoughtful exchange of ideas will not only help improve your schools and colleges but also influence the reauthorization of Title V of the Higher Education Act that deals specifically with teacher recruitment, preparation, and ongoing support.

How can I participate?

- Invite a diverse group of people from your community concerned about how we can attract and prepare teachers for the 21st century.
- Find a site with satellite downlink capability, like a community college, a school district office, or a community access station.
- Register your participation to receive information and materials.
- Invite the local press and provide information on local programs.
- Convene the group to watch the satellite broadcast on Thursday, April 17th.
- Ask a facilitator to lead your group's discussion on the designated questions.
- Take notes and send a summary of your discussion to the U.S. Department of Education and local colleges and policy makers.
- Visit a special Internet forum at http://www.ed.gov/

For more information, call 1-800-USA-LEARN.

A National Forum: Attracting and Preparing Teachers for the 21st Century

Thursday, April 17th 8-9:00 p.m. (Eastern time)

On Thursday, April 17th, the U.S. Department of Education will host a special opportunity for teachers and teacher educators to share their ideas about teacher preparation programs and how we can all assure that teachers are ready for the classrooms of the 21st century.

"Every classroom should have a talented and dedicated teacher" declared President Clinton as a call to action in his State of the Union address. To answer that call, Education Secretary Richard Riley announced a forum for teachers, colleges, and policy makers to discuss how together we can attract the next generation of teachers and how we can improve teacher preparation. This national forum recognizes that teachers have a powerful and positive role to play in improving American education. Too often in the past the voice of the experienced classroom teacher has not been heard by either policy makers or leaders of our great institutions of higher learning. This national forum seeks to change this dynamic and give the outstanding teachers a primacy of place in the ongoing dialogue on how we prepare the next generation of teachers.

The reasons for this seem clear. It makes little sense to talk about attracting and preparing the next generation of teachers without first talking to teachers who are working in the American classroom every day. Many teachers find that their teacher preparation left them unprepared for the reality of the classroom. Once there, most are left to "sink or swim" as they struggle to adapt to the demands of teaching. As a result, we are losing thirty percent of all new teachers in the first three years.

This national forum seeks to address this issue and others, and the thoughtful exchange of ideas will be most helpful as the U.S. Department of Education prepares to reauthorize Title V of the Higher Education Act this year. Title V deals specifically with teacher recruitment, preparation, and ongoing support. The forum also serves as and opportunity for your local schools, colleges and policy makers to get together to address critical issues that will enable your community to attract, prepare, and retain quality teachers in every classroom.

We hope you will join this unique and important dialogue on the teaching profession. The evening of April 17th Secretary Riley will speak during a special satellite event. We hope that you will gather a group to watch the broadcast and convene a local discussion on some specific questions. If you will then send us your ideas and comments, we will incorporate them in the final report of the national forum.

Here are some steps so that your community can contribute to discussion:

- Create a viewing and discussion group.
  Invite teachers of all backgrounds and levels of experience, students of education, college professors and administrators, principals, community leaders, state policy makers, and anyone else concerned about assuring teachers have the skills and knowledge they need to succeed.

- Find a site with satellite capability.
  To participate in the live, satellite broadcast, you will need a site with a satellite dish. Many school districts, colleges and universities have satellite capability and are willing to provide the technical support you need. Call the media services department or technology contact on your local campus and give them the enclosed satellite coordinates. Another possibility to watch the event is through your local cable system. If you have a school board channel or community access channel, they may be willing to broadcast the program and then you could watch in any room that has a cable connection.

- REGISTER YOUR PARTICIPATION!
  Fax the enclosed registration form to 202-205-0676. We will fax the questions to your program content and mail overnight a package of materials for your participants. We will contact your technical contact to assure they have the information they need to make the event a success.

- Contact your local press.
  We will provide a sample press release and supporting information for your local media. Contact your local education reporter and invite them to your discussion. You might tell them that your local event is part of a national forum and your comments will be included in the final report.

- Convene your group to watch the satellite broadcast on Thursday, April 17th.
  The satellite broadcast will provide a "jumping off" point for your local discussion. U.S. Secretary of Education Richard Riley, a teacher, a college administrator and Terry Dozier, a former National Teacher of the Year, will discuss some ideas on attracting and preparing quality teachers based on the ideas of award-winning teachers from across the country. The broadcast will also explain the questions provided for your local discussion.

- Convene your group (continued)
  The broadcast will take place from 8:00 - 9:00 p.m. Eastern time. Your group may want to meet before or after the broadcast to begin your own discussion. For example, in North Carolina, a group may meet at 7:00 p.m. to begin their discussion and then watch the broadcast and spend a few minutes reacting at the conclusion. In Oregon, a group

the broadcast and spend a few minutes reacting at the conclusion. In Oregon, a group may meet at 5:00 p.m. to watch the broadcast and then hold their own meeting.

- Ask a facilitator to lead your group's discussion on the designated questions.
  Several questions have been developed to guide your discussion and provide some structure to the national forum. You may want to select a facilitator to lead your discussion and assure that every question is answered and all participants are heard.

- Take notes and send a summary of your discussion to the U.S. Department of Education.
  You may want to designate two types of note takers: one to capture the ideas of each speaker and another to note the general mood and consensus of the group. For example, did everyone nod in agreement to a specific comment? Was there general frustration with a specific teaching technique?

  Send your comments and summaries to: National Teacher Forum, Room 6200, U.S. Department of Education, 600 Independence Ave., S.W. Washington, D.C. 20202. We also appreciate your comments on the National Forum itself and how we might improve future events.

  You may also want to share your ideas with your local colleges and universities and policy makers in your state and community.

- Participate in the Internet forum.
  You might want to post your group's comments on a special web site. Or encourage your participants to visit the web site at http://www.ed.gov/ and read comments from other sites and interested individuals across the country. More information on this Internet forum will be available when you register your participation.

The advice and counsel of classroom teachers and those preparing our nation's teachers are invaluable to our national discussion on attracting and preparing teachers. We truly appreciate your hard work in convening a group from your community. Please call 1-800-USA-LEARN if you have any questions.

Thank you!

Teacher Education Alliance

Iowa Distance Learning Association Conference (IDLA)

February 1997

The Iowa Distance Learning Association is a state chapter of the United States Distance Learning Association. Its constituents are educators in K-12 schools, area education agencies, private and public colleges and universities, and corporate medical, military, and government professionals. A variety of distance education topics were presented at the IDLA's 1997 annual conference, centering on the theme "Making History."

Pre-Conference Activities

- 30 letters were sent to Iowa college and university faculty members who had previously agreed to be the Teacher Education Alliance representative at their institution. The letter invited the representative to attend the IDLA Conference and the TEA meeting scheduled during the conference.
- Two rounds of follow-up phone calls to all representatives to encourage them to register for the conference.
- 14 representatives indicated intent to participate in TEA activities at IDLA conference.

Participants

- 11 TEA representatives attended the TEA meeting

Agenda

- TEA representatives were encouraged to attend concurrent sessions, keynote addresses and social activities.
- A special meeting for all TEA representatives was held.
- Representatives were given folders containing:
  - Encyclopedia of Distance Education Research in Iowa, 2nd Edition
  - Distance Education: Review of the Literature, 2nd Edition
  - the latest edition of TEA Times
  - a list of other TEA representatives attending the conference
  - a list of courses currently scheduled on the ICN
  - information on the IOWA Database
- Faculty members were asked to share their experiences with distance education with their colleagues.
- Representatives discussed common concerns and challenges, and discussed the progress they've made with distance education at their institution in the past year.
- Representatives were asked how the TEA could help them.
- One faculty member suggested workshops on a variety of topics, including planning for the use of technology, preparing pre-service teachers to effectively use distance education, ways to infuse technology into the curriculum, and staff support.

Post-Conference Activities

- TEA representatives were mailed a list that included the name, institution, phone number and e-mail address of all 30 representatives.
- The mailing also included a brief survey that asked for workshop topic ideas, information on scheduling preferences for a workshop, and suggestions on what else the TEA might be able to do to support distance education at their institution.
- All TEA representatives who did not attend the conference were also mailed a copy of the Encyclopedia of Distance Education Research in Iowa, 2nd Edition.

1997 IDLA Conference Attendees
Sponsered by the Teacher Education Alliance

Bill Armstrong	Graceland College	(515) 784-5254
Christopher Bell	Maharishi University	(515) 472-3913
Paulette Church	Waldorf College	(515) 582-8208
Lee Collins	Central College	(515) 628-5218
Ken Colwell	St. Ambrose University	(319) 333-6220
Jack Fennema	Dordt College	(712) 722-6226
Mary Herring	Morningside College	(712) 274-5000
Michael Hustedde	Teikyo Marycrest College	(319) 326-9594
Dennis Maxey	Buena Vista University	(712) 749-2115
James Romig	Drake University	(515) 271-4535
Sharon Smaldino	University of Northern Iowa	(319) 273-3250
Mei Shih	Westmar University	(712) 546-2005
Clement Steele	Loras College	(319) 588-7194
Roger Williams	Iowa Wesleyan College	(319) 385-6312

January 14, 1997

Dear _____:

The Iowa Distance Education Alliance (IDEA) has been funded for a fourth year by the U.S. Department of Education's Star Schools Program. You may remember that a component of the IDEA, the Teacher Education Alliance (TEA), provides support, including training, for preservice teacher education faculty from Iowa's public and private colleges and universities.

The first activity we are sponsoring is a series of meetings that will be held in conjunction with the Iowa Distance Learning Association Conference at Iowa State University on February 27 and 28. We'd like to invite you to attend. If you can't, perhaps you'd nominate a member of your faulty who has distance education responsibilities to attend the conference.

The registration form for the IDLA conference is enclosed. The TEA will pay expenses for you or your nominee, including travel, registration for the IDLA conference, and lodging at the Gateway Holiday Inn in Ames. Please make your own reservation for lodging and we will reimburse you for your costs.

Please complete and return the enclosed IDLA Conference Registration form to me by February 14, 1997. If you have any questions, please contact me.

I have also enclosed a *Request For Proposals*. The TEA is attempting to identify and support research related to distance education in Iowa. Please share this request with any interested faculty or staff. Thank you for your interest and cooperation.

Sincerely,

Michael Simonson
Professor, and
Coordinator - Teacher Education Alliance

February 20, 1997

Dear _____,

We are looking forward to seeing you at the Iowa Distance Learning Association's 4th Annual conference on February 27 and 28.

We have a record number of sessions for you to choose from during the conference, and we're certain you will return to your college or university inspired and excited about new approaches to distance education.

We have a special meeting scheduled for all Teacher Education Alliance (TEA) representatives during the IDLA conference. We would like you to come to that meeting prepared to discuss what is happening with distance education at your institution. Some of you have made a lot
we'd like you to tell us about your success and how you made it work. Others are struggling -- we'd like to help with the problems you are facing.

During that meeting you will also receive the paperwork necessary for the TEA-funded reimbursement on your room and transportation for the conference.

The TEA meeting will be held Friday February 28 at 2:10 p.m. in room 179 of the Scheman Continuing Education Building. We look forward to seeing you there!

Sincerely,

Nancy Maushak
TEA Coordinator

March 6, 1997

Dear TEA Representative:

At the IDLA Conference meeting for Teacher Education Alliance (TEA) representatives, some of you said you'd be interested in attending workshops that address some of the practical issues you're facing. We want to know what topics would serve you best, and when your schedule could best accommodate a workshop.

We'd appreciate it if you'd fill out the enclosed information sheet and mail or fax it back to us.

Also, I've enclosed a list of all the Teacher Education Alliance representatives. The names with an asterisk next to them are those who attended the TEA meeting held during the Iowa Distance Learning Association (IDLA) conference on the Iowa State campus last month. Please feel free to contact your colleagues to discuss distance education issues that you may have in common.

And as always, the Teacher Education Alliance is here to help you as well. Let us know if you have any questions, concerns or needs we could address.

Sincerely,

Nancy Maushak
Teacher Education Alliance

encl: Survey
TEA representative list

TEA Representative Survey

WORKSHOP TOPIC SUGGESTIONS:

What would you like to learn more about? Do you need help with the process of technology planning? How about infusing technology into the curriculum? Give us some ideas on topic areas that would benefit you most.

BEST DAYS OF THE WEEK FOR A WORKSHOP:

If you had to choose two days of the week to escape your office and immerse yourself in the world of distance education, what would they be?

BEST TIME OF YEAR:

Some folks prefer to sneak away from campus during the school semester, others would rather take a few days for a workshop during the summer break. What's your preference?

WHAT ELSE CAN THE *TEA* DO FOR YOU?

We're here to help you bring distance education to your campus and curriculum. Let us know what kind of support you need from us.

Please return this survey in the enclosed envelope or fax it to:
Nancy Maushak
FAX (515) 294-9284

Summary
TEA Representative Survey
Spring 1997

Workshop topic suggestions:

- Delivery of graduate courses over the Internet and by CD Rom; Instructional design of these courses
- I would be most interested in participating in a series of workshops on effectively using the ICN. Also would be interested in using Internet videoconferencing as an ancillary to ICN work.
- I'm eager to have my students (General Secondary Methods and Educational Technology) talk to or interact with similar students at UNI or Iowa or Iowa State.
- How to keep the equipment current on a low budget
- Our faculty wants ideas RE infusing technology into pedagogy, tech in curriculum, technology in practica, nuts & bolts of DE technology use.
- Process of technology planning to infuse technology into the curriculum, How about bringing in someone from outside Iowa? (NCREL, for example). What's happening nationwide at the K-12 level with DE? We are preparing our students for that world.
- Infusing technology into the curriculum

Best days of the week for a workshop:

- Monday & Tuesday
- Tuesday, Thursday, on the weekend
- Thursday & Friday or Friday & Saturday
- Monday or Friday
- Honestly, it depends on the semester and the week. NOT Monday
- Thursday & Friday or Friday & Saturday
- Friday & Saturday

Best time of year:

- Fall
- Summer (4)
- School year
- April/May/June. Need time to incorporate information into next year's curriculum

What else can TEA do for you?

- Resources -- what are the current best examples of graduate courses over the Internet
- Advance notice for courses on the ICN. First a month or so in advance, then a week or so before. Possibly this could be set up on a listserve/web page combination
- Until our classroom is up and running we can only talk about "how to"... (Clem/Loras)
- You are doing fine
- Last year I polled faculty and got little response or interest in DE. However there were a few "needs" suggested, but when I passed them on to TEA central, we never got a response. So, what I needed then was support.
- I realize the ICN is a key part of this grant, but let's not forget the use of the Internet for DE also (or to support DE/ICN classes)
- Our nearest available site is Calmar which is 50 minutes from us so until we get our own classroom we have a limited involvement.

Script

This is _____ from Iowa State University. Iowa State University is conducting an evaluation of the Iowa Distance Education Alliance, Iowa's Star School's Project. As part of that evaluation we are collecting information from the teacher education institutions in the state. You have been identified as the contact person for you institution. Would you be willing to spend approximately five to ten minutes of your time to respond to a few brief questions concerning your perceptions about the role of distance education in your teacher preparation program and any involvement you have had in Star Schools activities.

If No:

Would there be a better time for me to call back with these questions; or is there someone else I should speak with?

Contact:_____ Phone:_____

Date/Time:_____

Thank you for your time.

If Yes:

I would like to ask you several open-ended questions

1. How is distance education currently integrated into your curriculum for preservice teachers; and describe any future plans of involving students in distance education.

2. Describe the current level of faculty involvement with distance education at your institution and any future plans for involving faculty in distance education.

3. Describe the current level of administrative uses of distance education at your institution and any future plans to use distance education administratively.

4. List the top three issues related to the future of distance education in Iowa's preservice teacher education programs.

5. What groups or organizations do you feel should be taking a leadership role in the use of distance education in preservice teacher education.

6. On a scale of 1 to 10 with one indicating not at all important and 10 indicating extremely important, how would you rate the importance of using distance education to expand or enhance teacher education programs.

7. Is your institution currently connected to the Iowa Communications Network (ICN), and if not, when do you plan to connect.

8. Is there someone else at your institution to whom we should speak with?

9. Are there other comments you would like to make?

Thank you for taking the time to answer these questions. If you have further information you feel we should be aware of, please call our office at (515) 294-6919 and ask for_____.

Distance Education Alliance
Phone Survey Results
Fall 1997

How is distance education currently integrated into your curriculum for preservice teachers; and describe any future plans of involving students in distance education.

- ICN classroom introduced students to technology
- There are more (distance education) courses
- Internet connections in some classrooms
- Methods class could provide direct resources through Internet
- Students get a good feel for how to use resources
- Need to do more introductory types of things, some classes require distance education components
- One hour workshop on distance education, also one hour videos. Plans--no.
- Curriculum integration varies from program to program, not included at all. Plans--programs are independent here.
- No classroom -- preservice teachers see videos sent from Iowa State (Foundations & Applications of Distance Education series), no hands on.
- Have used ICN in a couple of courses--general secondary methods. Plans--yes, but not specifically identified.
- Currently no distance education in curriculum. Plan -- observing student teachers as opposed to driving to locations.
- Basic introductory course in education media and hands on ICN. Students see *Room With a View*; some courses on ICN, CUCME email, web. Future --continue to expand with more list serves and faculty workshops.
- ICN room is not built, underway for spring and summer, but four city schools will have an ICN classroom then. Plans -- hope to see it up and running for fall. Seminar for preservice teachers to sit in on teleconferences. Contact with real students for them. Consultations for faculty to make sure they are meeting needs of students for AA degree, transfer students. We want to make sure they are doing this all right and able to keep up.
- No real integration in college; some investigation of how it would benefit college; getting courses in still in discussion. Hoping for graduate course called "Email, WWW, Chat Vs ICN"
- Not integrated; students have course for audio visual media only. Plans -not really, want distance education to present for them; want to get to know the possibilities.
- ICN not used by undergraduates, but is used by graduate students. Plans --probably set and build room in '98 or '99.
- Minimal use: teach teachers to use fiberoptics network; minimal with Internet.
- We show students how to use the ICN -- we're 25 miles from the nearest ICN site.
- We use the Internet for research in a variety of courses. no future plans.
- At the moment we're using videos, very little distance education integration in classrooms besides the videos; classroom available in January of '98.

Describe the current level of faculty involvement with distance education at your institution and any future plans for involving faculty in distance education.

- Very limited
- Last year faculty in general taught two courses in distance education. They have
- offered quite a few distance courses (how-to courses).
- Minimal -- varies with programs.
- Fewer than 10% use it. Plans -- not sure, direction uncertain.

- UNI training sessions used, 4 departments offer courses using ICN.
- Lots of activity -- several masters programs on ICN, activity extensive in education studies, a number of faculty active outside education studies. Future --continue to expand.
- Faculty receiving courses through distance education for MA and Ph.D. level, no one is teaching, however.
- Discussion stage of what to do if it (ICN classroom) happens.
- No plans -- not a focus in program; extension building built and hope to have a fiber-optics connection up and running there.
- Two that teach regularly; yes, good chance one more looking into it.
- No teaching over ICN; minimal information accessed but no courses offered; however. meetings over ICN for faculty.
- Not much, no ICN site; email used.
- Jan Hanler taught a course using computers and making use of the Internet. At this moment no plans
- Just education -- just me and one other and the incoming chair, all faculty. Also, 3 people in communication, 2 in computer science, 2 in music department, 1 in math department.

Describe the current level of administrative uses of distance education at your institution and any future plans to use distance education administratively.

- Other than communication through email, very little.
- Every office on campus is "hot wired" to ICN with direct links to the world. ICN classroom on campus filling and used for meeting with other teachers on-line. Administration unknown really.
- No, they could use it, and discuss meetings on ICN.
- Some conferences and workshops but limited. Plans--probably as long as it is available.
- Just meetings for faculty.
- Attend meetings regularly on ICN; some teaching.
- Administration -- one dean is the coordinating counsel for distance education; follows policy and legislation for Iowa Association of Independent Colleges and Universities. Just hired new dean--will work with ICN links, satellite campuses overseas...already established for Internet.
- N/A...no
- N/A...probably little.
- Use mainly for professional meetings.
- One of the hubs in area -- ICN.
- Not in position to answer that; all classrooms are wired and all will be technology center.

List the top three issues related to the future of distance education in Iowa's preservice teacher education programs.

Training on how to use ICN (9)
How to integrate distance education into curriculum (9)
Access issues (7)
Connections for all schools (6)
Technology comfort issues (3)
Collaboration (3)
Funding (2)
Public awareness of the ICN (2)
Attitudes towards the ICN (1)

Publications

TEA TIMES: Volume 4, Number 3
TEA TIMES: Volume 4, Number 4
TEA TIMES: Volume 5, Number 1
TEA TIMES: Volume 5, Number 2
TEA TIMES: Volume 5, Number 3
Distance Education: Review of the Literature, 2nd Edition

TEA TIMES

Teacher Education Alliance
Iowa Distance Education Alliance
Iowa's Star Schools Project

October 1, 1996 Volume 4, Number 3

Calendar

October

8-10
ICN Workshop Area 10, Cedar Rapids

22-24
ICN Workshop Area 11, Johnston

23
Iowa Association for Communication Technology (IACT) Fall Conference, Kirkwood Community College, Cedar Rapids

November

4-6
ICN Workshop Area 15, Ottumwa

19-21
ICN Workshop Area 11, Johnston

February 1997

27-28
IDLA Conference
Iowa State University
Scheman Continuing Education Building

Multimedia in education: an interactive intercultural project

by Deborah L. Norlan

Distance education can assume many formats, including the use of multimedia and the Internet to communicate among students and teachers from different geographic areas and cultures. It is this use of multimedia and the Internet in distance education that spurred the Luther College education department to apply for grants offered by the Iowa US WEST Foundation and the US WEST Foundation to fund an interactive, multimedia project. Monies from both foundations were granted spring 1995 to develop and implement a multimedia project among three distant sites; Rock Point Community School on the Navajo Reservation in Northeast Arizona; Oelwein Public Schools in Oelwein, Iowa; and Luther College in Decorah, Iowa.

The collaborative project focuses on pre-service teacher education, and the development of multimedia projects by upper elementary and middle school students in the fifth and sixth grades from Oelwein and Rock Point. Multimedia projects are currently works-in-progress at the two schools, with student teachers, who participated in multimedia training and the use of the Internet during the 1996 spring semester, serving as multimedia "specialists" at each school.

Three students teachers are at each location serving as teachers in training in conventional terms, but they are change agents, introducing novice users, students, teachers, and administrators to multimedia, electronic mail, and the World Wide Web.

Fifth- and sixth- grade students are working as equal partners to create multimedia projects that eventually will be exchanged between the two schools.

Multimedia projects focus on the unique characteristics of students and cultures at the twolocations. Initially, the emphasis is on sharing what is known—the self, through written autobiographical narratives; still photo and video clips; and sound. Although a number of multimedia authoring combinations are available, the hardware and software tools used in the intercultural project include Power Macintosh 8500/120, Apple Quicktake 150 Camera, ColorOne Scanners and Ofoto 2.0, Macromedia Director 4.0, Adobe Photoshop 3.0, Adobe Premier 4.0.1, SoundEdit 16, and Netscape. Eventually, students will move beyond an exchange of what is known, as they develop autobiographical multimedia sketches, to what is unknown, and learn about others from a different language, culture, and area.

Ideally, the exchange of ideas will occur electronically. However, technology, including the Internet is not perfect. Furthermore, the technology is constantly

Interactive, continued on page 3

Deborah L. Norland is Project Director and Associate Professor of Education at Luther College in Decorah, Iowa. She has spent many years in K-12 and higher education including a number of years spent living and working with the Navajo.

Buena Vista's master's program —at a distance

by John Mouw

When Buena Vista University began designing the Master of Science Program in Effective Teaching, we wanted a program that would be both high in quality and convenient for practicing educators. We were also aware of teachers' schedules. During the academic year, teachers tend to be tied to their jobs in terms of both energy and location. On the other hand, summer months provide them with a little more flexibility-if not more time.

We wanted to keep these factors in mind as we scheduled the coursework. During the summer, students attend one intensive summer class on campus in a traditional face-to-face setting plus one six-week Iowa Communications Network (ICN) course which can be taken at one of several sites. This still gives our students several weeks to participate in those summer vacation activities which are so essential to their families. In addition, one course is delivered each semester over the ICN during the fall and spring semesters.

We found the two methods of delivery to be complementary. The students spent the first course of the summer in intense student-centered work. In an environment where there was a good deal of group work, the students became well-acquainted. The sense of camaraderie established in this first course carried over into the ICN setting. Students enjoyed using the communication between sites to continue the peer relationships and team building that had been previously established.

We took care in selecting the courses that would best fit the ICN as well as the on-site environments. Certain content requires hands-on experience and flexible delivery while other material lends itself to a formal, rather structured, multimedia presentation. A course such as an *Introduction to Graduate Study and Research,* with its heavy library usage component, or *Instructional Technology,* which requires a lot of hands-on experience, fits well with the "workshop" setting of summer. Other courses, including *Advanced Educational Psychology* or *Contemporary Issues,* comprise a logical set of ideas and are readily adaptable to the ICN environment. Multimedia possibilities provide an opportunity for a high-impact presentation of rather abstract concepts.

We are attempting to program into each fall and spring ICN course a strong experiential component. Since almost all of the students are practicing teachers, they work in a setting where they can observe and, in fact, experiment with some of the concepts being explored in the class. This helps to make what would be an abstract idea a bit more concrete.

In our brief experience, we have already discovered that the key to effective ICN instruction is advanced planning and organization. Full use of the multimedia possibilities of video, presentation software, and the overhead camera requires careful preparation of materials well in advance of the delivery of the course.

We had a good beginning this past summer. We think the ICN will add to both the quality and the convenience of our master's program.

John Mouw, dean of the graduate program at Buena Vista University, taught the first intensive summer class, Introduction to Graduate Studies and Research.

Call for Presenters

The fourth annual Iowa Distance Learning Association conference, "Making History" will be held at the Scheman Continuing Education Building at Iowa State University on Thursday, February 27 and Friday, February 28. Sessions will cover distance learning in education, business, government, and healthcare. If you are interested in presenting at this year's conference, please contact Nancy Maushak at 515-294-6919 or nmaushak@iastate.edu.

interactive, continued from page 1

changing and how the multimedia projects are shared depends upon the nature of the Internet service. Within a year, the project at Oelwein moved from a SLIP line connection to Luther College, to dependency on a local provider, to self-reliance using the Iowa Communications Network and fiber optics to become an independent service provider. This was great news for the project because Rock Point could have more time on their SLIP to Luther College. However, the Rock Point-Luther College SLIP sometimes work, and sometimes does not work, primarily because SLIP is a function of the quality and stability of the phone lines.

Just recently, (September 1996), the telephone service provider at Rock Point, switched from analog lines to digital lines-again welcome news for trying to transmit data through the SLIP internet connection.

But frustrations with the phone lines do not distract from the positive personal and technological dynamics of the project. The three sites working with each other are demonstrating how technology can be an integral part of intercultural communication and school transformation. Student, teachers, and administrators are excited about developing the skills requires to integrate interactive learning tools in the curriculum, and appreciate the opportunities of using the tools of technology for a cross cultural teaching and learning experience.

Luther College student teacher Jen Shierholz works with sixth grade students on a multimedia project at Rock Point Community School.

Simonson Says...
Partners in distance education

by Mike Simonson

One finds many companions for food and drink, but in a serious business companions are very few.
Theognis, 560 B.C.

In 1990, the Iowa distance education community consisted of a few visionaries scattered in community colleges, university extension divisions, and telecommunication companies. Today, distance education professionals are located in almost every educational institution in the state.

Two organizations are largely responsible for this growth. The first, the Iowa Distance Education Alliance, is made up of those individuals involved in the four years of the Iowa's federally- funded Star Schools project. The second is the Iowa Distance Learning Association, a professional organization for those involved in distance education. Where the IDEA provided needed resources to facilitate the phenomenal growth of distance education in the state, the IDLA brought together the expertise of the many talented educators practicing and studying distance education.

Next February, these two groups will once again come together for the annual Iowa Distance Learning Conference that will be held in the Scheman Continuing Education Building on the campus of Iowa State University. The conference planning committee has been meeting for several months. One centerpiece of the conference will be the IDEA Leaders of other Star Schools projects will be invited to Iowa to share their experiences and to learn about Iowa and its ground-breaking efforts in distance education. Additionally, several dozen sessions that celebrate the many accomplishments of distance educators will be included in the conference agenda.

Theognis spoke of *serious business.* Certainly the work of the distance educators in Iowa is a serious and important business. Iowans are fortunate they have companions in organizations such as the IDLA and the IDEA.

By the way, while the conference will concentrate on the serious business of educating learners at a distance, the conference planners realize the importance of opportunities for meeting many *companions for food and drink.* Reserve Thursday and Friday, February 27 and 28, 1997 for the distance education event of the year, the annual conference of the Iowa Distance Learning Association.

Mike Simonson is TEA coordinator and heads the research component of the Iowa Star Schools Project. He is a professor of Curriculum and Instructional Technology at Iowa State University.

K-12 distance learning demonstration sessions

News from the IOWA database

During 1996 the K-12 educational community has been offered a number of demonstration distance learning opportunities through the support of funding from U.S. Department of Education (USDE) Star Schools grant program. These demonstration programs enabled new presenters to become familiar with the network and gave many teachers and students their first experiences of distance learning via the ICN. All the presenters were enthusiastic to continue using the distance learning network to deliver their programs. We hope you will take advantage of their expertise and contact them to arrange your own distance learning opportunities. A few of the offerings are listed below. Others can be found at: **(http://www.iptv.org.iowa_database)**

Celebrating the Magic of Music

The Pioneer String Quartet of the Des Moines Symphony offers three different programs via the ICN. Mozart's Friends and Worlds of Music suitable for grades 1-6 and Colors of Music through Bowing for junior and senior high school string players.
Contact:
Education Coordinator
Des Moines Symphony
(515) 243-1140

Animal Welfare I

Mark Schmidt is a veterinarian whose interests lie in educating the public about the responsibility of pet ownership as well as the promotion of the veterinary profession. He tailors his presentation to be appropriate for any audience.
Contact:
Dr. Mark Schmidt
(515) 276-4549

Science Careers for Women

Discussion sessions with professional women mentors and student role models are featured. Sessions are tailored for grade appropriateness.
Contact:
Program for Women in Science and Engineering
Iowa State University
(515) 294-0966

TEA Times
Published by the Teacher Education Alliance of the Iowa Distance Education Alliance.

Editors:
Beth Kumar, bakumar@iastate.edu
Nancy Maushak,
nmaushak@iastate.edu

Teacher Education Alliance
Technology Research and Evaluation Group
E006 Lagomarcino
Iowa State University
Ames, IA 50011-3196
515 294-6919
Fax: 515 294-9284

Support for this newsletter is provided in part by U.S. Department of Education Star Schools grant #R203 B 20001-93

Next month in your November TEA Times:

- **Family and Consumer Sciences Educators and the ICN**
- **Hands-on Science Activities Over the ICN**

Teacher Education Alliance
E006 Lagomarcino Hall
Iowa State University
Ames, IA 50011

TEA TIMES

Teacher Education Alliance
Iowa Distance Education Alliance
Iowa's Star Schools Project

December 1, 1996 Volume 4 Number 4

Distance education as an agent for social change

by Teresa Hall and Margaret Torrie

Distance education has been utilized by educational, business, agricultural and governmental organizations for a variety of purposes. The value of the technology and the worthiness of the communication exchanges are not disputed. But how many Iowans have ever considered the Iowa Communications Network (ICN) as a potential tool for social change?

A state-wide initiative through the Iowa FutureS Unlimited Project seeks to reshape the bleak future that many girls face due to the lack of education, early parenthood or limited career options. This project may have an ally in distance technology. By providing access to information sharing and opportunities to meet role models over the ICN, young women and girls in high-risk situations may be given an interactive gateway to a different world.

How can the ICN impact social change? Technology in the ICN classroom includes not only lab equipment and computers, but also access to learning opportunities otherwise unavailable in a traditional setting. The ICN gives even the most remote school district a window to course offerings and information sharing on alternative subjects for girls. Many girls who aspire to enter nontraditional fields feel pressure from cultural influences to consider more traditional female careers. By helping girls to network with like-minded peers in other school districts across the ICN, they are encouraged to follow their dreams.

Role models for girls in science, technology, engineering, law, or medicine are often difficult to locate outside of large population centers in the state. By facilitating interaction between a few role models and many girls across the state via the ICN, the shortage of women in nontraditional roles may be addressed. The opportunities for women and girls in construction, manufacturing, skilled trades, engineering and entrepreneurial endeavors are numerous, but lack of publicity impedes progressive change. Successful women in careers in these fields can be showcased over the ICN to discuss concerns, educational requirements, and the rewards of non-traditional occupations with aspiring students throughout the state.

Indeed, the concept of bringing young women and nontraditional role models together over the ICN was the objective of an innovative workshop for Moingona Council Girl Scout troops in April of 1995. A panel of faculty and student representatives from the College of Engineering at Iowa State University were quizzed by three groups of Girl Scouts in Ames, Osceola and Ankeny. A number of questions provided a foundation for the experience such as: What does a mechanical engineer do? What classes do you have to take? What preparation in school do I need?

The girls were able to interact with current female students in engineering, male and female engineering faculty members, career planning and placement personnel.

The workshop was a learning experience for all parties and helped the girls see that engineers are female too. Another similar interactive session on the ICN is planned for October 1996.

The lesson to be learned from this

Social change, continued page 4

February 1997

27-28
Iowa Distance Learning Association Conference (IDLA)
Iowa State University

March

4-6
ICN Workshop Area 15
Ottumwa

11-13
ICN Workshop Area 10
Cedar Rapids

Eductors' Adoption of the Internet

by Patricia Anne Sereg

"Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system."

Everett M. Rogers

Many schools across the nation are connected to the Internet. A national survey indicates that approximately 50% of all elementary and secondary schools have Internet connections.

The approval of the Iowa Schools Technology Bill will allow Iowa schools to follow this trend. This technology bill includes funding for the purchase of hardware and software to improve instructional technology in public schools across the state of Iowa. But will teachers adopt this innovation into their classrooms and at what rate will this occur?

According to Rogers (1995), the adoption rate of an innovation is influenced by many factors: personality traits, perceptions of the innovation, implementation strategies, and organizational characteristics.

As teacher at Olmsted Elementary School and a graduate student at Iowa State University's Department of Curriculum and Instructional Technology, I was interested in researching the technology plan for my school district which includes funds for Internet connection. If schools use these funds to connect to the Internet, would teachers adopt the World Wide Web or would it become a World Wide Cobweb? This is a question I hoped to answer in a research proposal sponsored by the Teacher Education Alliance.

The purpose of my research was to determine if teachers in my district would adopt the Internet or if they would tend to resist this innovation. In addition, I wanted to determine indicators which influenced the adoption rate of the Internet.

As part of my research study, I distributed a survey to 240 teachers in the Urbandale Community School District to determine their comfort levels with computer technology, their current use of technology, and their perceptions of the Internet. A total of 110 surveys were returned. Of these, 100 were used in the final analysis.

The results showed that a majority of these teachers viewed the Internet mainly as a way to communicate with others. They tended to view the Internet as important to the classroom and to their school district and to agree that the Internet has many possibilities for future use. The teachers also felt that the Internet was easy to use and they enjoyed using it. They indicated that they wanted to learn more about integrating the Internet into their curriculum and hoped that training and administrative support for this would follow.

Fourteen percent of these teachers use the Internet for personal use at least once a day. Teachers with high usage levels of the Internet had more positive perceptions of the Internet as a classroom tool.

It is likely that these teachers will adopt the Internet into their classroom practices. They have high computer usage levels and high comfort levels with computers and local area networks. The rate at which these teachers adopt and integrate this technology into their curriculum will vary, but teachers surveyed agreed that there are numerous benefits of the Internet for classroom use.

Rogers, E.M. (1995) Diffusion of Innovations. (4th ed.) New York: Free Press.

Patricia Anne Sereg is a kindergarten teacher at Olmsted Elementary School in the Urbandale Community School District. She is finishing her master's program in Curriculum and Instructional Technology and is on the technology training cadre for her school district.

Request for Proposals

The Teacher Education Alliance is currently accepting proposals that investigate the diffusion of the innovation of distance education in Iowa. Collaborative efforts involving higher education institutions and K-12 schools are encouraged. Selected proposals will be funded for amounts up to $750. Proposals are due by January 15, 1997 and awards will be made by February 1, 1997. Proposals should be eight pages or less and should follow guidelines available from Nancy Maushak at (515)294-6919 or nmaushak@iastate.edu.

Simonson Says...

A vision for instructional technology in Iowa education

by Mike Simonson

The best and. . . "the bravest are surely those who have the clearest vision of what is before them, glory and danger alike, and yet, notwithstanding, go out to meet it."

Thucydides 460 - 400 B.C.

"Glory and danger alike" are before Iowa education. The Iowa Distance Education Alliance (IDEA) has begun its fourth year of actively infusing distance education into the educational institutions of Iowa. Many continuing activities are planned, as are a number of new initiatives. One interesting objective of the Teacher Education Alliance (TEA) component of the IDEA will be to conduct a comprehensive study/activity designed to develop a *vision for instructional technology in Iowa*. While it would be easy to wonder why visioning has not happened before 1997, it is apparent that this activity is perfectly timed to occur now.

Until recently, Iowa educators were probably not ready for a vision for instructional technology. It was only a short time ago when many questioned the propriety of using technology *at all*. Some are still skeptics, but the tidal wave of interesting, stimulating, and appropriate technologies and technological applications has made most Iowa educators join the rush to adopt and use instructional technologies, including distance education systems.

Central to technological applications in education is the Iowa Communications Network (ICN). The ICN is a major innovation that has had, and will continue to have, a deep and significant impact on learning and teaching in the state. Any vision for technology in Iowa education must include the expansion and growth of the ICN. It is the basic infrastructure for technology use in the state. Those who participate in developing the vision for instructional technology will most certainly be influenced by the positive impact of the ICN.

It is fun to think about a vision for instructional technology. One can imagine:

"In every community and neighborhood there are schools surrounded by playgrounds and sports fields with trees and grass. The schools themselves look modern but very familiar. Each is part of a locally controlled and supported district that is one of several hundred that comprise Iowa's technologically wealthy statewide educational system. Every learner and educator possesses a high-powered multimedia computer that is connected to a world wide network containing virtually unlimited educational resources. The network links to multi-sensory multimedia resources that are accessible from school, home, and business. Education is learner- and learning-centered and technology supported. Schools are smaller, teachers guide classes that never exceed 25, and the Iowa Communications Network is connected to every classroom and learning center in the state, and to other states and nations."

That was a try at visioning. Iowans interested in education should try the same thing. What should be Iowa's vision for instructional technology? Let us ignore glory and danger and *"go out to meet"* our vision.

Mike Simonson is TEA coordinator and heads the research component of the Iowa Star Schools Project. He is a professor of Curriculum and Instructional Technology at Iowa State University.

The staff of TEA Times wishes you all a safe and happy holiday season!

Participants in the panel discussion conducted over the ICN

social change, continued from page 1

experience is that the Iowa workforce of the future must integrate women into professional and technical occupations that have relied on more traditional populations in the past. This requires that girls in elementary and secondary education be given access to the latest technology in the classroom, have role models to set the pace for occupational goals, and receive encouragement to pursue nontraditional careers from teachers, peers, family and friends.

When girls are given the opportunity and desire to raise their employment expectations, they may be less likely to become a teen pregnancy statistic or become a member in the ranks of low skilled/ low paid workers. If distance education through the ICN can facilitate access to information for at-risk girls, the knowledge they gain may make the difference between becoming a future asset to the state rather than a potential burden.

Teresa Hall is a Ph.D. student at Iowa State University in the Department of Industrial Education and Technology. Her research interests lie in women in nontraditional roles and equity issues.

Margaret Torrie is an Associate Professor in the Department of Consumer and Family Sciences Education at Iowa State University. She has worked with vocational teachers on ways to adapt curriculum for use on the ICN as part of the Star Schools Project and has taught classes on the use of the ICN teaching laboratory.

TEA Times

Published by the Teacher Education Alliance of the Iowa Distance Education Alliance

Editors:
Beth Kumar, bakumar@iastate.edu
Nancy Maushak,
nmaushak@iastate.edu

Teacher Education Alliance
Technology Research and Evaluation Group
E006 Lagomarcino
Iowa State University
Ames, IA 50011-3196
515 294-6919
Fax: 515 294-9284

Support for this newsletter is provided in part by U.S. Department of Education Star Schools grant #R203 B 20001-93

Teacher Education Alliance
E006 Lagomarcino Hall
Iowa State University
Ames, IA 50011

TEA TIMES

Iowa Distance Education Alliance
Teacher Education Alliance
Iowa's Star Schools Project

February 10, 1997 Volume 5 Number 1

Calendar

February 27-28
IDLA Conference - Ames

March 5-6
ICN Workshop- Ottumwa

March 11-13
ICN Workshop - Cedar Rapids

April 2-4
ICN Workshop - UNI

TEA TIMES
Published bi-monthly by the Teacher Education Alliance of the Iowa Distance Education Alliance

Editors
Nancy J. Maushak
Beth Kumar
E006 Lagomarcino Hall
Iowa State University
Ames, IA 50011-3196
515 296-6919
Fax: 515 294-9284

Technology Research and Evaluation Group
College of Education, Iowa State University

Support for this newsletter is provided in part by U.S. Deparment of Education Star Schools grant #R203 F5000 1-95

Making history!

by Nancy Maushak and Mike Simonson

The Iowa Distance Learning Association will be making history at the 4th annual conference at the Scheman Continuing Education Building in Ames on February 27 and 28. This promises to be the largest IDLA conference ever. Over 40 presenters and 4 keynoters are on the program to present a variety of topics related to distance education.

Opening the conference Thursday, February 27, at 1:00, will be keynoter Susan Zvacek. Dr. Zvacek received her doctorate from ISU and is currently the Director of the Center for Learning Technologies at Old Dominion University. Her responsibilities include coordinating technology acquisitions and integration, training teachers for TELETECHNET, and creating technology-rich classrooms. Her presentation, "It's Still a Good Idea - What's Right about Distance Education", will take a look at the positive contributions of distance education and challenge some of today's technology myths.

Presenting at the conference banquet on Thursday evening will be noted ISU professor George Strawn. Dr. Strawn is currently on leave of absence from ISU, assisting the National Science Foundation with planning for the expansion of the Internet. The title of his presentation is "The Next Generation Internet and the Convergence of Communication and Computation". The greater visibility of the Internet has created a need to develop new Internet services and applications. Dr. Strawn will describe initiatives developed to accelerate the convergence of communication and computation technologies.

Everett M. Rogers, author of "Diffusion of Innovations", the standard text on technology innovation, will present the opening keynote address Friday morning at 8:30. An Iowa State graduate, Dr. Rogers is currently Professor and Chair in the Department of Communication and Journalism at the University of New Mexico. Dr. Rogers' current research interests include technology innovation and technology transfer in the United States and

History, **continued on page 4**

Simonson Says...

If thou of fortune be bereft
And in thy store there be but left
Two loaves - sell one, and with the dole
Buy Hyacinths to feed thy soul.
James Terry White, Not by Bread Alone

It has been a long, difficult winter. Fortunately, Spring is just around the corner, and one way to shrug off the dismals of February might be to attend the Iowa Distance Learning Conference that is discussed in this issue of *TEA Times*. It is our opinion that this is the most outstanding collection of speakers and presenters of any technology conference in Iowa.

For many, however, the sessions and keynoters are only one reason for attending a professional meeting. Conferences are times of rejuvenation and rebuilding. They are times where we meet our professional friends and learn from and with them. They are times when it is possible to professionally *feed thy soul*. The members of the staff of the Teacher Education Alliance have worked many hours over the last several months to plan the IDLA Conference. We hope the readers of *TEA Times* will make every effort to attend.

Other interesting issues face us in the next few months. Spring will dominate many thoughts, but there seems also to be a rejuvenation of interest in things education and technology. The Iowa Distance Education Alliance (IDEA), Iowa's Star Schools Project has selected Ames High School as its technology pilot school. It is truly wonderful that Ames is willing to make itself the test-bed for new ideas related to technology in education.

Also, the IDEA has selected ISU Professor Gary Downs to coordinate the development of a comprehensive and integrated middle school curriculum using the Mississippi River as a theme. Gary has selected a notable staff of educators to assist in the development of this "pilot curriculum."

And, the Teacher Education Alliance has funded and plans to fund additional research projects related to distance education in Iowa. The TEA's efforts with the teacher education programs of the state will also intensify this Spring as teams of specialists emerge from TEA offices at Iowa State University and leave campus to work in the departments and colleges of teacher education in the state.

A great deal has been accomplished, and much more is planned. Those involved in distance education should be pleased and proud. Their efforts should also be applauded, and we should *buy Hyacinths* for them and for ourselves.

Come to the Iowa Distance Learning Conference at Iowa State University on February 27 and 28.

Mike Simonson is coordinator of the TEA and is a professor in the Dept. of Curriculum and Instruction at Iowa State University.

TEA–funded research projects

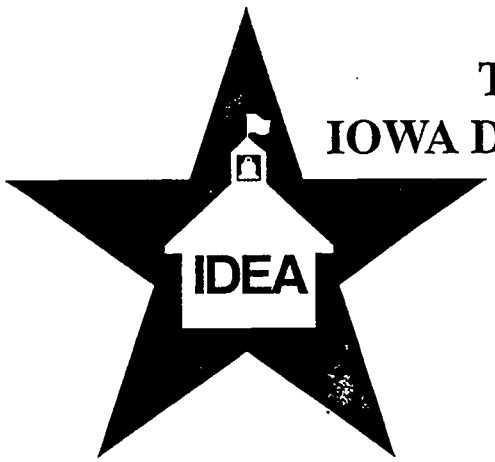
In the first round of funding for 1996-97, the TEA funded three research studies. Each researcher or team will receive a total of $750 upon completion of the study. Researchers and their studies selected for funding on Feb. 1, 1997 include:

Westbrook, Thomas S., Drake University. "The Utility of Interactive Study Guides as a Means to Enhance Content Interaction and Student Satisfaction in an Interactive Television Course Utilizing the Iowa Communications Network".

Zarghami, Fatemeh, Iowa State University. "Constructs That Contribute to Student Satisfaction for Participating in Graduate Level Courses Delivered by Full Motion Interactive Fiber-optic Communications Network".

Hall, Teresa, University of Northern Iowa and **Torrie, Margaret**, Iowa State University. "An Investigation of Potential Access to Role Models for At-Risk Females Using the Iowa Communications Network".

A second request for proposals has been distributed. Second round proposals are due by March 15, 1997 and awards will be made April 1, 1997. For more information or to request proposal guidelines contact the TEA at (515) 294-6919, or email: lynnman@iastate.edu.



TEACHER EDUCATION ALLIANCE
IOWA DISTANCE EDUCATION ALLIANCE
Iowa's Star Schools Project 1996-1997
Request for Research Proposals
Round #2

DISTANCE EDUCATION IN IOWA

PROJECT TITLE: Research and Distance Education in Iowa

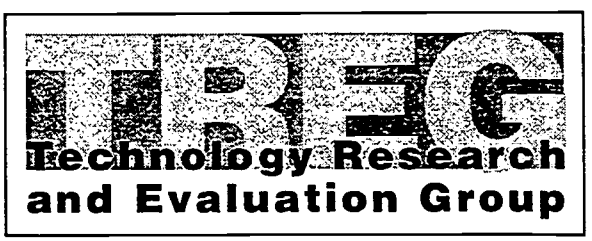
PROJECT PURPOSE: To fund proposals that investigate aspects of the diffusion of the innovation of distance education in Iowa. Of specific interest are studies that examine the use of the Iowa Communications Network, Iowa's statewide two-way full motion interactive fiber-optic telecommunications network, and the activities of the Iowa Distance Education Alliance. Collaborative efforts involving higher education institutions and K-12 schools are encouraged.

AWARD AMOUNTS: Selected proposals will be funded for amounts up to $750.

PROPOSAL DATES:

Proposals Due:	March 15, 1997
Awards Made:	April 1, 1997

PROPOSAL GUIDELINES: Proposals should be short (eight pages or less), and should follow guidelines available from:



College of Education, Iowa State University

Technology Research and Evaluation Group
College of Education
E006 Lagomarcino Hall
Iowa State University
Ames, Iowa 50011
(515) 294-6919
(515) 294-9284 (FAX)
nmaushak@iastate.edu (email)

History, continued from page 1

Japan. A case study approach is being used that involves both personal interviews of key individuals and review of archival materials. In a presentation entitled "The Diffusion of Distance Education Technologies", Dr. Rogers will summarize the key elements and recent developments in diffusion theory, identify key components of new communication technologies, and address the implications for distance education.

The last keynoter, presenting at 3:00 on Friday afternoon, will be Carolina Cruz-Neira. Dr. Cruz-Neira is an Assistant Professor at Iowa State University. One of her main research areas is the integration of virtual reality interfaces. Dr. Cruz-Neira's presentation, "High Performance Virtual Reality: Immersed in Science and Engineering", will describe the main features of the C2, a virtual reality alternative to head-mounted displays. Current C2 projects and work in progress will be described.

In addition to four high-power keynoters, 42 concurrent sessions have been scheduled. Presenters include experts in the field of distance education from K-12 education, higher education, business, and government. Topics are varied and address distance learning, distance education technologies, and research in distance education. A limited sampling of titles includes: "The Future of Videoconferencing", "Fair Use Guidelines for Multimedia", "Distance Learning in an Average Iowa High School", "From Mozart to Mosquitoes: A Distance Learning Demonstration Project", and "Distance Learning Opportunities for Educators".

Join your colleagues in "Making History" by attending the 4th Annual Iowa Distance Learning Association Conference, February 27 and 28. It is not too late to register. Registrations will be taken through the first day of the conference. For information contact: Janet Gardner, Iowa State University, Extended and Continuing Education, (515) 294-5366.

Nancy Maushak is a research associate with Technology Research and Evaluation Group in the College of Education, Iowa State University.

Coming in the April issue of TEA Times:
Teaching and Learning Chemistry on the ICN
Attitudes of Adults Enrolled in Graduate Degree Program Using the ICN

Teacher Education Alliance
E005 Lagomarcino Hall
Iowa State University
Ames, IA 50011

TEA TIMES

Iowa Distance Education Alliance
Teacher Education Alliance
Iowa's Star Schools Project

April 1, 1997 Volume 5 Number 2

Calendar

April 2-4
ICN Workshop - UNI

April 16-19
Computer Workshop - UNI

May 6-8
ICN Workshop - AEA 15 - Ottumwa

On a High Fiber Diet

by Thomas S. Westbrook

For many of us, beginning a high fiber diet brings with it a certain level of anxiety and less anticipated satisfaction than we receive from our traditional menu. It is, typically, something we would rather not begin, if we had the choice, and often leaves us longing for the *real thing*. It is not until we discover that foods high in fiber are in fact edible, have taste, and result in positive change that we begin to accept our new diet.

While admittedly a stretch, beginning an MBA degree program offered entirely on the Iowa Communications Fiber Optic Network (ICN) brought forth similar feelings for the 52 students enrolled at four ICN locations in Iowa. It was not until the students experienced the ICN in action, began to interact with other students, and discovered that distance education via the ICN works that they became comfortable with learning at a distance. These facts represent a few of the initial findings from a longitudinal study that tracked the students over the two-year degree program.

The installation of the Iowa Communications Network enabled Drake University to extend instruction of its 36 credit hour MBA degree program to students enrolled at three off-campus receive sites. Part-time, adult students admitted to the MBA program attended two evening courses offered during six semesters beginning fall 1994 and concluding summer 1996. The instructors were full-time faculty of the College of Business and Public Administration who taught for the first time in a distance education environment.

The distance education classes originated at Drake and were received at three community colleges. Drake formed a partnership with the three community colleges who hosted the MBA program. The community colleges provided the MBA students access to their ICN classroom, library, computer laboratories, sold textbooks and assigned test monitors when needed by the faculty.

High Fiber, **continued on page 3**

Designing Instructional Events for Distance Learning Environments

by Brenda Sugrue

Traditional instructional design approaches carve the instructional landscape into a series of separate events, for example the classic "Gagne's nine events". These events are usually thought of as linearly-sequenced parts of a "lesson". The "lesson" model does not fit well with more recent conceptions of learning environments and distance delivery systems. This article proposes a new conception of the events of instruction to guide the design of instruction for distance learning environments.

The traditional Gagne approach to designing instruction (Gagne, Briggs & Wager, 1992) specifies nine events: gaining learners' attention, informing learners of the objective of the instruction, stimulating recall of prior knowledge, presenting content, providing guidance on how to learn the content, eliciting performance, providing feedback, assessing performance, and enhancing retention and transfer. The strategies employed for each event can change depending on the content and learners being taught. Gagne and others (e.g., Smith and Ragan, 1993) make very detailed prescriptions for adaptation of some events based on some variation of Gagne's original content distinctions: verbal information, motor skills, attitudes, cognitive strategies, and intellectual skills which are broken into discriminations, concepts, and rules. No instructional design theorists, not even Gagne himself, make specific prescriptions for adapting events for different learners. That may be because there are no clear prescriptions for learner analysis in the first place.

I will now describe a model of the events of instruction that is simpler and more useful than previous models for de-

Designing, **continued on page 2**

Designing, **continued from page 1**

signing distance learning. This model retains many of the strengths of Gagne's approach; however, there are only three content types and five events of instruction. Six learner characteristics are singled out as the most critical to analyze, not just before, but also during instruction. Prescriptions are given for adapting instructional events for different content and learners.

Content Types

This model assumes that all content can be classified using only three categories: Procedures, Concepts, and Principles (Sugrue, 1995). Any content that involves *how and when* to carry out actions and decisions is classified under Procedures; any content that is concerned with *what* things are is classified under Concepts; any content that deals with rules that explain *why* procedures work or why concepts are related is classified under Principles.

Learner Characteristics

This model assumes that there are just a small number of learner characteristics that influence learners' affective and cognitive responses to instuctional experiences. Learners' prior knowledge (PK) and general or metacognitive ability (MA) determine the extent to which they can direct/control/regulate their own learning. Learners with low prior knowledge, or low metacognitive ability need much more structure and guidance during learning. Learners' perception of the value and difficulty of the learning goal determine the amount of cognitive effort that learners will invest. Effort will drop when learners' perceived value (PV) is too low and perceived difficulty (PD) is either too high or too low. Learners' preferences for media (PM) and control (PC) also influence the extent to which they will engage in, and invest effort in a learning situation. If there is a mismatch between learners' preferences for media and control, then effort will decrease. For example, if a learner likes a lot of structure and guidance, but the instructional environment gives the learner lots of control, then the learner may withdraw.

Events of Instruction

This model assumes that there are really only five events of instruction: Orientation, Information, Practice, Monitoring, and Feedback. Orientation can include descriptions and demonstrations of goals; inoculation against low PV by describing the value of the goal; inoculation against too low or too high PD by describing the objective difficulty level of the goal and how the instruction will make it either more or less challenging; an outline of the content, methods, and media that make up the learning environment; and directions for learning in the particular environment. Information and Practice depend on the type of content to be learned (Procedures, Concepts, and Principles). Information can be descriptive or demonstrative. Practice can be either cognitively or contextually authentic. Table 1 indicates what kinds of information and practice are appropriate for each content type.

Goal/ Content	Information		Practice	
	Descriptive	Demo	Cognitive	Contextual
Procedures	list steps & cues	live or simulate	order steps critique	do it
Concepts	definitions	examples	classify on paper	classify real
Principles	state rules	worked examples cases	predict explain decide pick sol.	solve realistic cases/ problems

Monitoring relates to perceptions (PV and PD) and preferences (PM and PC) as well as to performance on practice tasks. Monitoring is essentially learner analysis that is done *during* learning. Data gathered on perceptions, preferences, and performance can be fed back to the learner in the form of progress reports. The "performance" that is monitored is performance on practice activities; no distinction is made between practice and assessment. Perceptions and preferences are monitored by having learners answer oral or written questions about their perceptions and preferences.

For learners whose performance is poor, perception and preference data should be checked to determine if the root of the problem was a lack of effort. If the perceptions and preferences suggest minimum effort, then feedback should be targeted at perceptions and preferences first. For learners with low performance but moderate perceptions, and preferences that match the media and level control provided, then feedback should focus on elements of practice, and related information, that were weak.

Advantages of the Simpler Approach

The advantages of the approach to analysis and design described here are:

1. It has relatively few components which are closely integrated;
2. Events of instruction do not have to be designed or presented linearly; for example, one could design all of the practice tasks first; then design the system that will be used to monitor performance, perceptions, and preferences; and finally design the information and orientation resources that would be needed to complete those practice tasks. Delivery can also be non-linear; while orientation would probably always come first, practice and information could be integrated in many different ways, with monitoring and feedback occurring at a variety of points during information/practice episodes.
3. Learner analysis is clearly defined, and continues during instructional delivery; strategies for supporting learning are integrated with strategies for supporting motivation; motivation is conceived as effort investment, and the cognitive variables (perceptions and preferences) that influence effort are monitored and adjusted with feedback;
4. Media can be selected separately for each of the five events of instruction; for example, the World Wide Web could be used for orientation and information; small groups could be used for contextually-authentic practice activities; video taping could be used to monitor performance; questionnaires on the Web could be used to monitor perceptions and preferences; and feedback could be given to individual learners via email. Media selection becomes a matter of selecting the most efficient medium available for a particular event.

Application to Design of Distance Learning Environments

A simple chart can be used to insure that all five events of instruction are included in a learning environment. Distinctions such as on-line/off-line, synchronous/asynchronous, and individual/small group/large group can be used to map the events of instruction to media and contextual features of a distance learning environment. Table 2 is an example of such a chart. This kind of chart would be completed after task and learner analysis, but before actual design of instruction. Once the chart is complete, then the designer knows which pieces of instruction need to be designed, and for which medium and context.

Event	Individual		Small Group		Large Group	
	On-line	Off-line	On-line	Off-line	On-line	Off-line
Orientation						
Information						
Practice						
Monitoring						
Feedback						

Designing, **continued on page 4**

Simonson Says...Six Research Studies Funded

"Finally, the most fundamental characteristic of a profession is the skills involved are based upon theory which is constantly being expanded by research."James Finn, 1963

One of the most significant contributions of the Teacher Education Alliance is the sponsorship of applied and basic research dealing with distance education in Iowa. Recently, the staff of the TEA selected six additional research proposals for funding. The six are: **Abel, Omally.** Telecommunications Innovativeness: Teacher Participants in a Telecommunications Training Course; **Clark, Thomas.** Distance Education Policy and Iowa Schools: A Survey of Administrators; **Kagima, Leah, and Hausafus, Cheryl.** Computer Self-Efficacy and Integration of Email and Internet Into College Courses; **Reese, Lynn.** A GED Math and Science Test Preparation Option: The Iowa Communications Network; **Rezabek, R.** A Proposal to Study the Motives and Factors Affecting Participation in Adult Distance Education Classes in An Iowa Community College; and **Wright, Kristen.** Potential Uses of the Iowa Communications Network for Conducting Ceramics Workshops: A Needs Assessment.

These studies and three others previously funded will be incorporated into the 3rd Edition of the Encyclopedia of Distance Education Research in Iowa, which will be published next fall. The recently published 2nd Edition of the Encyclopedia is now available by contacting the Technology Research and Evaluation Group at Iowa State University.

Mike Simonson is coordinator of the TEA and is a professor in the Dept. of Curriculum and Instruction at Iowa State University.

High Fiber, continued from page 1

Various means were employed to evaluate the effectiveness of offering the degree program utilizing the ICN. The first evaluative process was a longitudinal profile of the students self-reported attitudes which began prior to the start of classes and continued until the completion of the last term. The second process was a qualitative, post-program review consisting of interviews with the administrators, faculty, and students who organized, taught and enrolled in the degree program. The intent of the evaluations was to obtain data to assist Drake University evaluate the utility of offering a complete degree program over the ICN and to strengthen future programs.

The following generalizations summarize some of the findings of the research:

1. The admission profile and grades earned by the remote students over the two-year degree program were not different from the students who attended the same classes in the on-campus ICN classroom. This is not a new research finding but is an area of concern to most individuals in academe.
2. The remote students anticipated less interaction with the instructors and among the students, and being less satisfied in the ICN classes than in traditional face-to-face classes. This is a new finding and accentuates the need for faculty to incorporate interactive class discussions and exercises at the start of the first distance education class. In addition, the qualitative study discovered the need of the sponsoring university to offer a student orientation program prior to the start of the degree program classes. The program should include training on how to employ the technology of the ICN classroom, information concerning faculty expectations for graduate study, and the administrative processes of the sponsoring institution.
3. The remote students' level of overall and site specific interaction with the instructors and among the students increased during the degree program. This was especially true of site specific interaction. This adds to our understanding of the *esprit de corps* that develops among students at remote sites. It was of interest to note that the faculty found the interaction at the remote sites to be both productive and counterproductive to the teaching/learning process. The faculty were concerned about the level and type of interaction that occurred at the remote locations when the audio of the classroom was not engaged. While this concern was shared by a few students, most of the students thought the interaction and cohesiveness formed at the remote sites aided in their understanding of the course material and was crucial to their satisfaction and retention in the degree program.
4. The satisfaction level of the remote students mirrored that of the on-campus students, was generally high, and did not change over the course of the degree program. The remote students reported a general satisfaction with the delivery of the classes over the ICN but felt that the use of the ICN slightly decreased the overall success and impact of the degree program. This was due to the use of the ICN technology and the technological difficulties encountered at times during the classes. The students, however, expressed deep gratitude for Drake's willingness to offer the degree program via the ICN and indicated that they would not have been able to complete an MBA had it not been for the distance education opportunity.

The faculty also reported general satisfaction with the degree program offered over the ICN. They did, however, indicate that they were unable to read the nonverbal and subtle clues of the remote students which they find helpful to recognize questions or cognition of material. This, they felt, slightly reduced the overall success and impact of the degree program.

5. The faculty and students were unanimous in the feeling that the instruction of some of the class sessions should originate at the remote locations. Those faculty who originated classes at the community colleges felt it was beneficial and a good means to become better acquainted with the students. The students overwhelmingly appreciated having the faculty come to "their" classroom.
6. There was high praise by the administrators, faculty, and students for the efforts of the community colleges who hosted the degree program classes. Indeed, the partnership formed with the three community colleges was viewed as a key element in the delivery of the degree program.

This summary represents a sampling of the findings of the two evaluative processes employed during and after the MBA program utilizing the ICN. The data derived from the study was beneficial to assess the utility of offering the MBA via the ICN as well as to provide information pertinent to improving future degree programs. Overall, the efforts to evaluate the MBA via ICN proved a worthy undertaking and is highly recommended for other institutions to pursue. I welcome your comments and experiences with offering classes and degree programs over the ICN and other distance education delivery methods.

Thomas S. Westbrook is an Assistant Professor inthe School of Education at Drake University.

Designing, continued from page 2

Conclusion

The approach to instructional design outlined here integrates analysis, design, and delivery decisions that were kept separate in older instructional design models. When analysis, design, and delivery are closely aligned, analysis becomes part of delivery, and delivery specifications can precede design. This creates a flexibility that is compatible with the often complicated and prespecified media configurations in distance learning environments. Events of instruction are no longer a linear set of steps that must be present in every "lesson". Events are media-independent functional components of a learning environment that can be combined creatively in many different delivery systems.

References

Gagne, R.M., Briggs, L.J., & Wager, W.W. (1992). *Principles of instructional design* (4th ed.). Forth Worth, TX: Harcourt Brace Jovanovich.

Smith, P.L., & Ragan, T.J. (1993). *Instructional design.* New York: Merrill.

Sugrue, B. (1995). A theory-based framework for assessing domain-specific problem-solving ability. *Educational Measurement: Issues and practice, 14*(3), 29-36.

Brenda Sugrue is an assistant professor of Instructional Design and Technology at the University of Iowa

TEA TIMES
Published bi-monthly by the Teacher Education Alliance of the Iowa Distance Education Alliance

Editor:
Nancy J. Maushak

Coordinator:
Michael Simonson
E006 Lagomarcino Hall
Iowa State University
Ames, IA 50011-3196
515 296-6919
Fax: 515 294-9284

Support for this newsletter is provided in part by U.S. Deparment of Education Star Schools grant #R203 F500-96.

ERIC Technology Research and Evaluation Group
College of Education, Iowa State University

Coming in the June issue of TEA Times:

- ☆ Teaching and Learning Chemistry on the ICN
- ☆ ICN Classroom Designs

TEA TIMES

Iowa Distance Education Alliance
Teacher Education Alliance
Iowa's Star Schools Project

June 2, 1997 Volume 5 Number 3

Applied Vocal Music Instruction on the ICN

by Donald Simonson

On October 13, 14, and 15, 1993 members of the ISU Depart ment of Music Instrumental Faculty conducted the first experiments in applied music instruction on Iowa's then new fiber-optic network known as the ICN (Iowa Communication Network). Applied Music Masterclasses were offered for Iowa high school students who were preparing to audition for the Iowa All-State Music Festival. To fully test the capabilities of the fiber-optic system it was decided that masterclasses should be offered on the Clarinet (high frequencies), Trombone (low frequencies), and Percussion (broad frequency range). All three Masterclasses proved extremely successful and on that basis it was felt that no further experiments were necessary to test the functional efficiency of the ICN as a vehicle for applied instrumental music instruction. The next step was to design a test to evaluate the ICN's efficacy for applied vocal instruction. Such an experiment was scheduled for May 21, 1996.

ISU Department of Music Voice Faculty members Donald Simonson and Janet Alcorn are frequent Masterclass presenters throughout the Midwest, working regularly with both high school and college aged students. While Simonson was experienced with music instruction at a distance, particularly employing the ICN, Alcorn had never been involved in any form of distance education. She was, however, quite excited about the prospect of teaching applied music over the ICN. The subjects for the Masterclass were drawn from Valley High School, West Des Moines, IA, and Maquoketa High School, Maquoketa, IA, two of Iowa's finest high school music programs.

Unlike the Instrumental Masterclasses which were designed to assist students in their preparation for the Iowa All-State Music Festival Auditions, the Vocal Masterclasses focused on the student's preparation for the annual Iowa High School Music Association Small Group and Solo Contest. At Contest, students are adjudicated and ranked on their performance of two solos or small group (duet, trio, quartet, etc.) selections. Scores range from Division I (superior) to Division IV (poor). Unlike the All-State Auditions, in which all individuals on a particular instrument were required to perform the same musical selections, each student performing at Contest is allowed to choose music which suits their unique skill level or musical aptitude. The contest repertoire is drawn from the body of musical literature often described as 'Classical' but more appropriately titled 'Serious' or 'Art' music, and includes Operatic, Oratorio (Sacred), and Art Song selections, accompanied by piano. The last requirement, that of piano accompaniment, was a potential problem. Each ICN site needed an on-site piano. Luckily, the wide availability of electronic/digital keyboards precluded the need and extra expense for piano movers and tuners at each site. Both Valley and Maquoketa had excellent digital keyboards available which were easily transported to their respective ICN classrooms for the scheduled Masterclass.

On Tuesday, May 21 at 3:00 PM the Applied Voice Masterclass originated from the ISU Lagomarcino ICN Classroom. By 3:05 PM both the Valley and Maquoketa ICN sites had logged-on. There were a few technical glitches which were easily resolved by Ray Pregitzer, the ISU ICN technical specialist. After a brief introduction and tutorial on the Masterclass format and the operations of the microphones (no special audio equipment was employed for the Masterclass, only the standard ICN microphones), we were ready to begin. The first performer, Scott, a sophomore from Maquoketa moved into position, introduced himself, his teacher, the title of his selection, and started his performance. When Scott finished singing, the first order of busi-

(Editors note: Dr. Simonson's article was inadvertantly omitted in the 2nd edition of the Encyclopedia of Distance Education Research in Iowa. Our apologies to Dr. Simonson. We hope that this in some small way makes up for our error.)

Vocal Music, **continued on page 2**

Vocal Music, **continued from page 1**

ness was to conduct a quick poll of the Valley and ISU sites to evaluate transmission quality of the performance. The results were surprising in the least. Both the audio and video quality were unanimously praised for their quality and clarity. While high quality was expected for the video, it was a question as far as the audio signal was concerned. Given the speech-only design parameters for the ICN Classroom microphones and monitor speakers, their ability to capture, transmit, and reproduce such a high-fidelity audio signal was an unexpected bonus. With all the technical concerns resolved the real work of the Masterclass began. The first performer, Scott, again moved into position and listened attentively to the comments and criticisms, following which he attempted to refine and adapt his singing along the recommended lines. As the presenters continued working with Scott, it became increasingly evident that the technology was quickly becoming transparent to all the participants. The level of subtlety at which the presenters and participants worked was no different from that found in the typical voice studio. The only missing element was physical proximity, and that was never an issue of concern. In short, the ICN dissolved into the background. The Masterclass continued with a performance by Coeli, a junior from Valley High School. As before, the performance and ensuing comments, etc., progressed as if all the participants were in the same room. The session continued in the same fashion for the each of the four remaining student performers. As each student finished their portion of the Masterclass the presenters questioned them as to the quality of their ICN experience. In each and every case, the response was — excellent. The technology clearly proved itself to be an effective means of applied voice instruction.

Having completed the Applied Voice Masterclasses, the process of evaluating the effectiveness of the ICN as a delivery system for teaching applied vocal music remained. The evaluation process consisted of a brief follow-up survey that was distributed to each of the presenters, participating singers, accompanists, vocal music directors. All thirteen participants responded and completed the survey. The responses (in parentheses and emboldened below) are noted below.

The survey responses, being overwhelmingly positive, affirm the effectiveness of the ICN as a delivery system for applied vocal music instruction. Those participating school music teachers are convinced that the ICN can positively affect and impact the performance of their vocal music students. The ISU faculty presenters are also convinced of the ICN's potential as an educational aid. These results compare favorably with those collected for an earlier series of Applied Instrumental Music Masterclasses delivered over the ICN. In short, a negative word has yet to be spoken about the ICN and its effectiveness for applied music instruction. From the musicians and music educators point of view, it is a technology to be embraced, explored and exploited to increase and broaden the impact and reach of our art.

Reference

Simonson, D. (1994). The Iowa Communications Network as a Vehicle for the Delivery of Applied Instrumental Music Instruction. Encyclopedia of Distance Education Research in Iowa, 185-191.

Simonson, D. (1995). Applied Music on the ICN. Proceeding -Bridging the Distance: AECT Summer Conference, 426-437.

Donald Simonson is an Associate Professor of Music at Iowa State University

TEA-IDEA ICN MASTER CLASS SURVEY

1. Before your ICN Master class experience, had you thought that teaching applied music was a possible use for the ICN?
   yes **(2)** no **(11)**
2. If you answered 1. no, why?
   Wasn't aware of the technology.(1)
   Thought of the ICN as a visual medium not an aural medium.(2)
   Just didn't think of it.(9)
   No reason or response given.(1)
3. What did you believe would be the greatest shortcomings of applied instruction over the ICN?
   a. Sound Quality **(10)**
   b. Video Quality **(0)**
   c. Ease of use **(0)**
   d. Classroom/student management **(2)**
   e. Interactivity **(1)**
   f. Other (specify) **(1)**
   (Expected system glitches and bugs common to new technology)
4. What were the greatest shortcomings of applied instruction over the ICN?
   a. Sound Quality **(0)**
   b. Video Quality **(0)**
   c. Ease of use **(0)**
   d. Classroom/student management **(0)**
   e. Interactivity **(1)**
   f. Other (specify) **(12)(No shortcomings)**

***Survey* continued on page 3**

Survey continued from page 2

5. What did you believe would be the greatest benefits of applied instruction over the ICN?
   a. Access to experts (9)
   b. Interactivity (0)
   c. Ease of use (1)
   d. Low cost (0)
   e. Potential for increased input (4)
   f. Other (2)
   (Didn't know what to expect)
6. What were the greatest benefits of applied instruction over the ICN?
   a. Access to experts (10)
   b. Interactivity (2)
   c. Ease of use (0)
   d. Low cost (0)
   e. Potential for increased input (4)
   f. Other (2)
   (Ability to access other participating sites)
7. Please rate the following on a scale of 1 to 5, with 1 the lowest and 5 the highest. **(Mean Score)**
   a. Speech sound quality (4.4)
   b. Music sound quality (4.2)
   c. Overall sound quality (4.3)
   d. Video quality of media and music (4.8)
   e. Video quality of instructor/student performances (4.8)
   f. Overall video quality (4.8)
   g. Ease of use as a passive participant (5.0)
   h. Ease of use as an active participan (4.9)
   i. Overall ease of use (4.9)
8. Compared to other forms of Distance Education delivery, how would you rank the ICN (scale of 1 to 5, 1=not effective-5=highly effective)? **(Mean Score=5.0)**
9. What was your expectation of the effectiveness of applied music instruction over the ICN?**(Mean Score=3.7)**
10. Based on your experience with the All-State Masterclass Series, how effective is applied music instruction over the ICN? **(Mean Score=5.0)**
11. How likely are you to participate in future ICN applied music masterclasses?(1=not likely, 5=very likely) **(Mean Score=5.0)**

TEA TIMES
Published bi-monthly by the Teacher Education Alliance of the Distance Education Alliance

Editor:
Nancy J. Maushak
Coordinator
Michael Simonson
E006 Lagomarcino Hall
Iowa State University
Ames, IA 50011-3196
515 296-6919
Fax: 515 294-9284

Support for this newsletter is provided in part by U.S. Deparment of Education Star Schools grant #R203 F500 -96

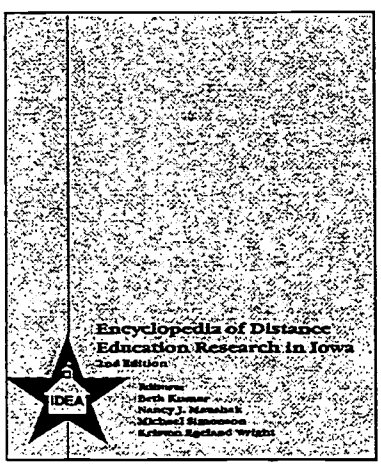
IT&TE
Technology Research and Evaluation Group
College of Education, Iowa State University

Calendar

June 11-13
ICN Workshop - AEA 10
Cedar Rapids

June 17
Room Managers Workshop - AEA 10

June 25-27
ICN Workshop - AEA 03
UNI and other sites to be announced



2nd Edition now available

The second edition of the Encyclopedia of Distance Education Research in Iowa is now available. The Encyclopedia is a publication of the Teacher Education Alliance of the Iowa Distance Education Alliance, Iowa's Star Schools Project. It features action research conducted by K-12 and higher education educators and graduate students. The second addition contains the original 16 research papers and an additional 8 studies recently conducted. The literature review section has been expanded and updated.

To receive your one, free copy contact Sara Hall, at the TREG office. Phone: 515-294-6919, email: elizabth@iastate.edu, FAX: 515-294-9284.

Simonson Says...

"We have a great plan for distance education in Pennsylvania, it won't be like that dinosaur in Iowa."

Comment from Pennsylvania Technology Specialist

I heard this statement on a recent trip to Philadelphia. The person did not know that I was from Iowa, or that I was involved in the Iowa Communications Network. Because he was a pretty nice guy, I filled him in right away. He was immediately embarrassed, but told me that he had heard that Iowa's system was "a dinosaur" from several people, including a recent email from an Iowa friend just that morning. We changed the subject quickly, but later I began to think about it. Why would anyone say such a thing about the fantastic Iowa Communications Network (ICN)?

The answer to my naive question is obvious. Most of us in Iowa who use and see the capabilities of the ICN value it, but others, especially those outside the state, only go by what they hear. And, what many hear is that our technology is too costly, too cumbersome, and too limited.

It also seems apparent that we from Iowa are not getting the word out about the wonderfully exciting events occurring in Iowa, many because of the ICN. We do not have a significant publicity campaign, we do not have a large enough national presence, and most important, we do not have a national spokesperson for what we are doing. Maybe we should begin to be more proactive in publicizing the many educational success stories directly related to the availability of the ICN and related technology projects. Or, maybe we just have comfort in the fact that we are making a significant impact on education in our state and if others do not understand, so what?

I tend to believe that we owe it to the profession to widely publicize the educational success stories in Iowa. Perhaps a three pronged process might work. First, let's try to get some national publicity in the mass media. Do not ask me how, but I am sure that Pam Johnson would really be impressive being interviewed by Diane Sawyer. Second, let's consider an international conference on distance education and instructional technology. Many may remember the iceberg conference held at ISU a number of years ago. I am not sure what came of it, but it sure got a lot of press time. Maybe we could bring educational leaders from 25 or 30 countries to discuss Iowa's approach to distance education and educational technology. Finally, why not identify a spokesperson to represent Iowa. James Garner did beef. Maybe he's available?

Certainly, a little of this kind of thing goes a long way and we do not want to seem silly, or superficial. Just as certainly, there are important, far-reaching events happening in Iowa and some feel we owe it to the learners of today and tomorrow to tell the Iowa story to the world.

"Make no little plans, they have no magic to stir the blood."

Mike Simonson is coordinator of the TEA and is a professor in the Dept. of Curriculum and Instruction at Iowa State University.

Call for Articles:

We are always looking for articles for the TEA Times. If you are doing something interesting with technology in the classroom and would be interested in submitting an article please contact us at 515-294-6919, or email nmaushak@iastate.edu.

Teacher Education Alliance
E005 Lagomarcino Hall
Iowa State University
Ames, IA 50011

Distance Education:

Review of the Literature, 2nd Edition

Teacher Education Alliance • Iowa Distance Education Alliance • Iowa's Star Schools Project

Dan Hanson
Nancy J. Maushak
Charles A. Schlosser
Mary L. Anderson
Christine Sorensen
Michael Simonson, Coordinator

July, 1996

Research Institute for Studies in Education
College of Education • E005 Lagomarcino Hall • Iowa State University • Ames, Iowa

Distance Education:
Review of the Literature, 2nd Edition

Teacher Education Alliance • Iowa Distance Education Alliance • Iowa's Star Schools Project

Dan Hanson
Nancy J. Maushak
Charles A. Schlosser
Mary L. Anderson
Christine Sorensen
Michael Simonson, Coordinator

July, 1996

Research Institute for Studies in Education
College of Education • E005 Lagomarcino Hall • Iowa State University • Ames, Iowa 50011

U. S. Department of Education's Star Schools Program, Grant #R203 F5 0001-95

Preface

Distance Education: A Review of the Literature, 2nd edition, was written with the teacher, trainer, graduate student, professor, and media specialist in mind, The second edition updates the literature previously reviewed, especially the research related to distance education in the United States. It provides a brief, yet comprehensive overview of the currently available literature on distance education. In addition to providing a historical perspective of distance education and comprehensive summaries of the major theories and definitions associated with this discipline, *Distance Education: A Review of the Literature, 2nd edition* examines the current operational issues inherent in distance education enterprises. Most important, this publication contains summaries of a cross section of all research dealing with distance education, not merely the positive literature. Specifically, this book includes:

- a definition of distance education,
- the major distance education theories espoused by recognized leaders in the field,
- an overview of the history of distance education,
- a summary of distance education research,
- an overview of current operational issues concerning the management and administration, personnel, programming, and facilities of distance education enterprises,
- and a selected bibliography of distance education literature.

Distance Education: A Review of the Literature, 2nd edition is an essential reference for those who want an overview of the literature related to distance education.

Dan Hanson
Nancy J. Maushak
Iowa State University
Ames, Iowa
1996

This monograph was written for the research group of the Iowa Distance Education Alliance, Michael R. Simonson, Coordinator, and was funded in part by U. S. Department of Education Star Schools grant # R203 F5 0001-95.

Table of Contents

Chapter 1

Distance Education: Definition, History, Status and Theory **1**

What is Distance Education 1
The History of Distance Education 3
Status of Distance Education 6
Theory and Distance Education 7
Fordism, Neo-Fordism, Post-Fordism: A Theoretical Debate 15
Summary 17
References 18

Chapter 2

Distance Education: A Review of the Literature **21**

Introduction 21
Learning Outcomes 21
Learner Perceptions 22
Learner Attributes 24
Interaction 28
Distance Education Technology 30
Summary 31
References 31

Chapter 3

Distance Education: Operational Issues **34**

Management Issues 34
Personnel Issues 36
Programming Issues 40
Facilities Issues 41
Summary 42
References 42

Appendix

Distance Education: A Selected Bibliography **45**

Research

Request For Proposals, 1996-1997
TEA Final Report Manuscript Preparation Guidelines
Correspondence: TEA Mini-Grant Award Letter
Summary: TEA Mini-Grant Research Topics
Encyclopedia of Distance Education Research in Iowa, 2nd Edition

TEACHER EDUCATION ALLIANCE
IOWA DISTANCE EDUCATION ALLIANCE
Iowa's Star Schools Project
1996-1997

Request For Proposals

to study

DISTANCE EDUCATION IN IOWA

PROJECT TITLE: Research and Distance Education in Iowa

PROJECT PURPOSE: To fund proposals that investigate aspects of the diffusion of the innovation of distance education in Iowa. Of specific interest are studies that examine the use of the Iowa Communications Network, Iowa's statewide two-way full motion interactive fiber-optic telecommunications network, and the activities of the Iowa Distance Education Alliance. Collaborative efforts involving higher education institutions and K-12 schools are encouraged.

AWARD AMOUNTS: Selected proposals will be funded for amounts up to $750.

PROPOSAL DATES:

Proposals Due:	January 15, 1997
Awards Made:	February 1, 1997

PROPOSAL GUIDELINES: Proposals should be short (eight pages or less), and should follow guidelines available from:

Teacher Education Alliance
Technology Research and Evaluation Group
College of Education
E006 Lagomarcino Hall
Iowa State University
Ames, Iowa 50011
(515) 294-6919
(515) 294-9284 (FAX)
nmaushak@iastate.edu (email)

Request For Proposals

TEACHER EDUCATION ALLIANCE
IOWA DISTANCE EDUCATION ALLIANCE
Iowa's Star Schools Project
1996-1997

REQUEST FOR PROPOSALS
Research Grants - $750

I. GRANT POLICIES

Grants are to encourage and support educational research about distance education in Iowa. This program does not fund requests for curriculum development, inservice training or workshops, unless there is a significant research component of the project.

A. Educational Research

Types
This project supports both basic and applied/action-oriented research.

1. basic research ---
Basic research is pursued without regard for the immediate applicability of the results to practical situations. Although the investigators may ultimately be interested in the application of their findings, they do not allow this interest to determine their choice of problem, theory, and research procedures. Basic research is more interested in methodological and theoretical rigor than in practical relevance. For example, a basic research study might concern the identification of different learning styles of students in a distance learning activity.

2. applied/action-oriented research ---
Applied/action-oriented research is pursued primarily to develop techniques and products which will have immediate classroom use. Although the early phases of applied research may occur in laboratory classrooms, the research purpose is the development of specific products which will be tested (or proved) later under ordinary classroom conditions. Applied research is more interested in educational relevance than in methodological and theoretical rigor. An example of an applied research study would be research on the effectiveness of interactive study guides in a math class.

NOTE: Although the above descriptions may help distinguish "basic" and "applied" research, it is also useful to think of them as occupying different points on a single continuum, with purest basic research (purely theoretical with no concern for practical application, only for the purpose of adding to the body of knowledge) on one end and applied research (strictly pragmatic, for the purpose of testing/evaluating how a specific idea or practice or product will impact the classroom or other part of the educational system) at the other end.

Approaches

A wide range of research approaches, from quantitative to qualitative, is acceptable. Studies appropriately using qualitative methodologies are encouraged.

Method

There are widely accepted techniques for conducting educational research. The techniques collectively are called the scientific method.

Grant applicants are encouraged to utilize the scientific method. Depending upon whether the quantitative or qualitative approach is selected, the detail, labeling, and/or sequence of conducting the following elements may vary.

Elements of the scientific method usually include:

- definition of the problem
- development of hypotheses or models to be tested/measured/assessed
- development of a study design and measuring instruments/processes
- data collection
- data analysis
- conclusions and inferences

NOTE: For further information regarding educational research, refer to sources such as:

Ary, Donald; Jacobs, Luch Cheser; and Razavich, Asghar. Introduction to Research in Education (Third Edition). Holt, Rinehart, and Winston, Inc.

Bogden, Robert C. and Sari Biklen. Qualitative Research for Education. Allyn and Bacon.

Borg, Walter R. and Gall, Meredith Damin. Educational Research, An Introduction. (Fifth Edition). Longman.

Kerlinger, Fred N. Foundations of Behavioral Research. (Third Edition). Holt, Rinehart and Winston, Inc.

Wittrock, Merlic C., editor. Handbook of Research on Teaching. (Third Edition). Macmillan Publishing Company.

Priority Areas for Proposals

Grant applications should address one or more of the following general priority areas:

1. Distance Education in Iowa
2. The Iowa Communications Network
3. Diffusion of Innovations Theory
4. The Iowa Distance Education Alliance, Iowa's Star Schools Project
5. Studies that build on previous IDEA/TEA Star Schools funded research

II. ELIGIBILITY CONSIDERATIONS

A. Eligibility

Grant proposals from both institutions and individuals (who are associated with an institution/organization) will be accepted, but all must be from Iowa applicants or have at least one in-state applicant. Graduate students are especially encouraged to apply.

When the proposed research study would be strengthened through joint efforts with other eligible applicants, such collaboration is favored. Collaboration with others in whose interests research is undertaken ensures a fuller perspective and eliminates the gap between researcher and "researched".

Any eligible institution or individual may submit more than one proposal.

B. Availability and Use of Funds

Awards for 1996-97 will be for $750.

$250 of the approved grant funding will be provided at the beginning of the grant period. The remainder will be available after satisfactory completion of the research study.

Grants will be made for the period (Feb 1 - August 30).

A one page interim report will be required by May 15, 1997, and a final report will be due no later than September 30, 1997. Reports in journal article form are encouraged. A final report format will be provided when grants are awarded. All final reports will be published in an Encyclopedia of the Research: Distance Education in Iowa, 3rd Edition.

III. PREPARATION OF PROPOSALS

Proposal Format

For proposals to be considered, they should contain the following elements, in the order indicated:

Cover Page
Research Proposal Summary
Narrative
Summary of Budget Estimates
Budget Explanation
Appendices (one-page vita of key personnel and other significant appendices)

Cover Page

The cover page should include the project's title, the investigator's name, address, and phone number, and the investigator's institution.

Research Proposal Summary

The summary is to be a clear and simple description of the proposed research study. State the objectives of the proposed research study and its basic elements. Provide as much detail as possible within the space limitations. The summary should be one page, or less.

Prepare the research proposal summary for publication purposes. It should highlight the importance of the study and be able to stand alone.

Narrative

The narrative should not exceed eight (8) pages double-spaced. The narrative should include:

1. Significance and Need

   Conduct a short review of relevant literature and relate it to your research questions. Provide a clear statement and description of the need for research in the topic area to be addressed. **Build a case for the need for your research study.**

2. Study Description

   Clearly describe the purpose of the proposed research; state measurable objectives for the study, making certain each objective relates to the study's purpose.

3. Plan of Operation/Methodology

   Describe the methods/procedures to be followed to achieve the objectives and state why they were selected. In your discussion, address:
   a. study design
   b. responsibilities of key personnel
   c. plan for monitoring and addressing progress

4. Timetable of Activities

   Identify the study's starting date, termination date, and other significant progress points. Use milestone charts and/or other graphics to outline activities throughout the research study period, if appropriate. If possible the study should be completed by September 30, 1997.

5. Expected Outcomes

   Describe the anticipated outcomes related to the proposed research objectives.

6. Applicability of Research Results

   Discuss why results or products of the proposed work can be expected to lead to better practices of distance education in Iowa and/or identify the need for and guide further research.

7. Evidence of Collaboration

If applicable, describe collaborative efforts (who, what, how) to be carried out.

8. Personnel Qualifications

Briefly describe the education and experience of the researcher and other key personnel and relate these qualifications to the proposed study activities.

Include vitae of key personnel in an appendix. Each vita should be one page in length (maximum) and should indicate the individual's qualifications for the proposed research study.

Budget Matters

A Budget Summary is required.

In a separate "Budget Explanation" section, identify and justify components of each major item in the budget. The explanation should briefly state why an item is important and how the prospective cost was estimated.

Requests for funding should relate to future expenditures.

Proposals showing in-kind contributions and/or matching funds are encouraged. In-kind contributions are property or services that support the research study but do not represent a "real dollar" expenditure. Matching funds are funds provided by the applicant which are equal to or a portion of the costs requested. An applicant's matching contribution may be in the form of dollar expenditures or in-kind services/resources.

Appendices

One appendix is required: That which includes the vitae of key personnel. (Each vita should be a maximum of one page in length.) In addition, appendices may be used sparingly to provide background or supporting information. It should be kept in mind, however, that reviewer's time is limited, so voluminous appendices may not be studied carefully.

IV. SUBMISSION OF PROPOSALS

1. Two copies of the complete proposal are required.

2. Copy must be double spaced on one side only of 8 1/2 X 11 white paper.

3. Pages are to be numbered.

4. Proposal copies are to be assembled in the order previously described and stapled but not otherwise bound.

5. The cover page is the only letter of transmittal needed or desired. Institutional letters of endorsement (e.g.. from major professors) or transmittal, supporting letters, etc., should be placed in appendices.

6. For round one, proposals must be mailed by January 15, 1997, or hand delivered by 5:00 p.m. on January 15, 1996 to:

The Teacher Education Alliance
Technology Research and Evaluation Group (TREG)
E006 Lagomarcino Hall
College of Education
Iowa State University
Ames, IA 50011

7. Questions may be directed to TREG at (515) 294-6919.

Timetable

Application packets made available	11/15/96
Completed applications (2 copies) due	1/15/97
Announcement of awards	2/1/97
Funds made available to grantee	2/15/97
Interim report due	5/15/97
Final report due	9/30/97

V. PROPOSAL EVALUATION

Review Process

A review panel will evaluate applications. The panel will select for award those proposals which, in its judgment, offer the greatest potential for improving education in Iowa classrooms. In some cases, negotiation with the applicant will be conducted.

Evaluation Criteria

Three general criteria will guide the review panel; they are the proposal's significance, its feasibility, and its appropriateness for funding support.

Reviewers will examine proposals and submit comments based on the specific criteria included with this document.

VIII. OTHER CONSIDERATIONS

Human Subjects

The protection of the rights and welfare of human subjects involved in research and related activities is the responsibility of the grantee.

Notification of Final Action

Notification of awards is made in writing. Individuals whose proposals were not selected will be advised as promptly as possible.

VI. RESEARCH STUDY AND AWARD MANAGEMENT

Grant Administration

Grants will be administered in accordance with the terms and conditions of this document.

A grant is normally made to an organization or individual, known as the grantee. Notification of an award is made by letter. The grant establishes a relationship in which:

A. The TEA of the IDEA agrees to provide financial support for the research study to be performed under the provisions of the grant guidelines and contractual agreement.

B. The grantee agrees to perform the research study, to manage prudently the funds provided by the grant, and to adhere to the provisions of the grant guidelines and contractual agreement.

The grantee is free to accept or to reject the grant. Normally, the proposal to obtain funds constitutes acceptance of a grant once it is made.

All written inquiries of a programmatic or technical nature should be directed to the TEA- TREG, E006 Lagomarcino Hall, Iowa State University, Ames, Iowa, 50011. Telephone calls may be directed to (515) 294-6919.

The grant period extends from the effective date of the award through the expiration date. It is that span of time during which the objectives of the study are to be achieved and the grant funds are available for appropriate obligation. This period may be longer than the duration of the study in order to allow time for preparation of reports after the study is concluded. All commitments of grant funds should be made during the grant period.

No-Cost Extensions

It is expected that research studies will be completed within the time period specified in the award instrument. When the work is delayed, a no-cost extension may be requested. This request, along with a justification, should be received at least 45 days before the award expiration date.

Changes in Research Study Operation

Although major changes in the conduct of the study may be proposed at any time, changes in the scope, objectives, budget, and/or professional personnel of the study should be approved in advance. Inform TEA-TREG immediately of any changes or delays.

If the proposed research study is not completed, the grantee will provide an accounting of funds spent and return unexpended funds.

Research Study Reporting Requirements

Interim Report. A one page interim report should be submitted May 15, 1997

Final Research Study Report. Two copies of the Final Research Study Report are to be submitted no later than Sept. 30, 1997. Follow report format provided when awarded grant.

The purpose of a Final Report is to provide a factual account of the research study for the record. It will be published in an Encyclopedia of the Research: Distance Education in Iowa, 3rd Edition.

Affirmative Action, Equal Opportunity, and Civil Rights Policy Statement

The TEA - TREG is committed to the principles and concepts of affirmative action, equal opportunity and civil rights. In awarding research grants, the TEA - TREG will not discriminate on the basis of race, color, religion, national origin, gender, age, or handicap.

By submitting a proposal, prospective grantees certify they will carry out proposed grant functions in an environment free of discrimination.

TEA Final Report
Manuscript Preparation Guidelines
for publication in
Encyclopedia of Distance Education Research in Iowa

1. Write your manuscript using Microsoft Word 6.0 for either Macintosh or DOS/Windows.

2. Single space the entire manuscript. Allow one line of space before and after each heading.

3. Use 1" margins on all sides (top, bottom, right and left).

4. Indent the first line of each paragraph 0.5".

5. Text:

Regular text:	10 point Times, full justified
Abstract text:	10 point Times, italic, full justified
Paper title:	14 point Times, bold, centered
Author listing:	12 point Times, centered
Section headings	12 point Times, bold, left justified
Sub-headings:	10 point Times, bold, left justified

6. Do not type section headings or titles in all caps.

7. Do not include or refer to page numbers in your manuscript. Pages will be enumerated when processed for printing

8. Figures and tables should be no wider than 6 1/2" and incorporated into the document.

10. Length should not exceed 10 pages.

Submit your manuscript on a 3 1/2" disk, clearly identified. Include two laser print copies, and cover sheet. Cover should include title, and names, affiliations and addresses of all authors.

Send disk and paper copes with cover sheet no later than September 30, 1997, to:

Teacher Education Alliance
Technology Research and Evaluation Group
College of Education
E006 Lagomarcino Hall
Iowa State University
Ames, IA 50011

February 10, 1997

Dear:

Congratulations! Your proposal has been recommended for funding by the Teacher Education Alliance (TEA).

Please contact Lynn Manternach of the TEA staff in the Technology Evaluation and Research office at ISU. She will work with you to help you receive the first $250 of your grant immediately. The remaining $500 will be available after you submit your final paper.

Acceptance of this grant requires you to submit two reports:
1) A one to two-page interim report summarizing your accomplishments to date to be submitted no later than May 15, 1997.

2) A final paper, following manuscript guidelines attached, must be submitted no later than Sept. 30, 1997. This paper will be included in the Encyclopedia of Research on Distance Education in Iowa, 3rd Edition to be published at the conclusion of the project.

If you have any questions, contact Lynn Manternach or me. We are glad that you are part of our TEA research team.

Sincerely,

Michael Simonson, Professor
TEA Coordinator

cc: Maushak
Manternach
enc: Manuscript guidelines

Teacher Education Alliance
Funded Research Projects
A Summary of Research Topics

The Teacher Education Alliance awarded funding for nine research proposals on the topic of distance education in Iowa. The research was completed during the 1996-1997 academic year. The following document lists the project titles and names of the investigators, and summarizes the goals of each research project.

Abel, Omalley
E006 Lagomarcino Hall
Technology Research and Evaluation Group
Iowa State University
Ames, IA 50010
(515) 294-2438

Telecommunications and Innovativeness: Teacher Participants in a Telecommunications Training Project

This study proposes to look at the innovativeness of teacher volunteers for a telecommunications project, the perceived organizational innovativeness of the teachers' school, and the computer anxiety level of the teachers. Demographic data will also be collected. These data will be compared with data from identical surveys collected from 400 randomly selected teachers in the state of Iowa.

Clark, Tom
Tom Clark Consulting
1319 Carroll
Ames, IA 50010
(515) 233-8322

Else, David
Institute for Educational Leadership
629 Schindler Education Center
University of Northern Iowa
Cedar Falls, IA 50614
(319) 273-2026

Distance Education Policy and Iowa Schools: A Survey of Administrators

The purpose of this study is to identify and prioritize distance-education-related policy issues seen as important by school administrators, and identify differences in administrator perceptions of these issues. School administrators whose districts have participated in the ICN for at least a year will be asked to relate their experiences with distance education policy issues that affect their schools.

Hall, Teresa
ITC Room 2A
Industrial Technology
University of Northern Iowa
Cedar Falls, IA 50614
(319) 273-2562

Torrie, Margaret
215 MacKay
Consumer and Family Sciences
Iowa State University
Ames, IA 50010
(515) 294-1733

An Investigation of Potential Access to Role Models for At-Risk Females Using the Iowa Communications Network

This research seeks to discover if it is feasible for the ICN to be used as a communication tool for bringing role models and young women in nontraditional careers together for an information exchange. The study proposes a survey of a group of women and men who have volunteered as speakers for the Iowa Future$ Project, and each county's Department of Human Services directors. The instrument will inquire about their previous knowledge of the ICN, their willingness to participate in joint session with young women, and other related issues.

Kagima, Leah
311 MacKay
Dept. of Family & Consumer Sciences
Iowa State University
Ames, IA 50010
(515) 296-7526

Hausafus, Cheryl
211B MacKay
Dept. of Family & Consumer Sciences
Iowa State University
Ames, IA 50010
(515) 294-5307

Computer Self-Efficacy and Integration of Email and Internet in College Courses

The purpose of this study is twofold: first, to investigate the relationship between computer self-efficacy of faculty and the extent of integration of Email and Internet into college courses; and second, to determine if there is a significant difference between mode of delivery of college level courses and the extent of integration of Email and Internet into those courses. Results from the study will provide information on the current status of faculty concerning knowledge related to computer use.

Reese, Lynn
Des Moines Area Community College
2006 S. Ankeny Boulevard
Ankeny, IA 50021
(515) 965-7086

A GED Math and Science Test Preparation Option: The Iowa Communications Network

The researcher proposes a study to determine the effectiveness of the Iowa Communications Network as a GED preparation method. The study will document the completions resulting from math and science instruction for enrolled students in an ICN classroom and a typical GED classroom. Twenty participants will be identified and selected for GED math and science preparation with ten receiving instruction in an existing GED classroom (control group), and ten receiving instruction using the ICN. Three science and math tests measuring progress will be administered to all participants at designated intervals during the instructional process. The participants' actual GED math and science tests completion rates will be assessed and reported.

Rezabek, Roger J.
Director, Academic Telecommunications
Hawkeye Community College
1501 E. Orange Road
Waterloo, IA 50704
(319) 296-4017

A Study of the Motives and Factors Affecting Participation in Adult Distance Education Classes in an Iowa Community College

The researcher proposes to investigate community college students' motives for enrolling in distance education courses, the barriers that are perceived to exist for students who enroll in distance education courses, and the encouragement factors that distance education students perceive. A group of distance learning and adult education experts will form an electronic focus group. The purpose of this group is to formulate the key issues and questions to be explored in a questionnaire and during interviews with distance education students. The student questionnaires will provide demographic information about distance education students, and explore their motives and factors of participation/enrollment.

Westbrook, Thomas S.
School of Education
Drake University
Des Moines, IA 50311
(515) 271-3078

The Utility of Interactive Study Guides as a Means to Enhance Content Interaction and Student Satisfaction in an Interactive Television Course Utilizing the Iowa Communications Network

The purpose of this study is to determine the significance of using interactive study guides as a means to enhance learner-content interaction and student satisfaction in an interactive television graduate course utilizing the ICN. The study sample will consist of 50 students enrolled in a graduate education class offered over the ICN at eight locations. Twenty-five students will receive a study guide containing all of the content information provided during the first half of an eight-hour instructional module. The remaining 25 students will receive an interactive study guide that does not contain all of the content information and requires students to fill in missing information that is provided by the instructor. Assessments will be administered to determine if there are significant differences in the level of learner-content interaction and student satisfaction.

Wright, Kristen Egeland
E006 Lagomarcino Hall
Technology Research and Evaluation group
Iowa State University
Ames, IA 50010
(515) 294-6919

Potential Uses of Iowa Communications Network for Conducting Ceramics Workshops: A Needs Assessment

The researcher proposes to explore ways the Iowa Communications Network could be used to hold ceramics training workshops for Iowa art teachers. the study proposes to survey 200 randomly selected high school art teachers in Iowa to find out about their previous knowledge of the ICN, their innovativeness, and their backgrounds and needs in the area of ceramics education.

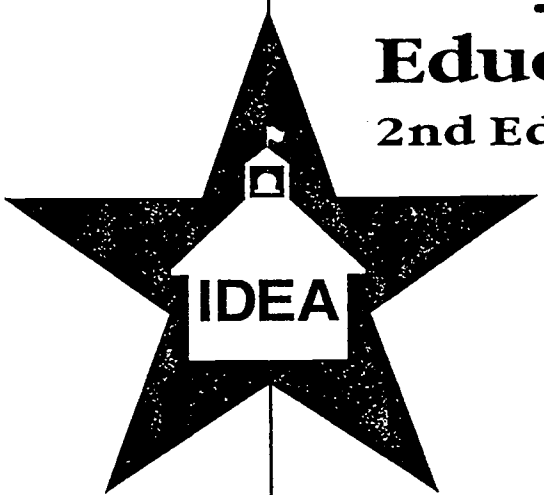
Zarghami, Fatemah
129 MacKay Hall
Family and Consumer Sciences
Iowa State University
Ames, IA 50010
(515) 294-6367

Constructs That Contribute to Student Satisfaction for Participating in Graduate Level Courses Delivered by a Full-Motion Interactive Fiber-Optic Communications Network

The purpose of this study is to assess the degree to which selected factors regarding two-way full-motion interactive fiber-optic courses have impact on the level of graduate students' satisfaction. Students who have been taught through the ICN during the summer of 1996, fall of 1996, and spring of 1997 will be surveyed to identify the distance learners' motivation, needs, and obstacles encountered in participating in distance education.

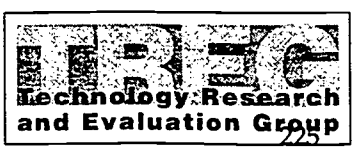
Encyclopedia of Distance Education Research in Iowa

2nd Edition revised June 1997



Editors:
Nancy J. Maushak
Michael Simonson
Kristen Egeland Wright

A publication of the Teacher Education Alliance of the Iowa Distance Education Alliance, Iowa's Star Schools Project. This project was funded in part by U.S. Department of Education Star Schools Grant #R203 F 5000 1-95



Technology Research and Evaluation Group
E006 Lagomarcino Hall, College of Education
Iowa State University, Ames, IA 50011
(515) 294-6919 Fax: (515) 294-9284

TABLE OF CONTENTS

PREFACE		i
SECTION I: INTRODUCTION		1
Simonson, Michael	Overview of the Teacher Education Alliance, Iowa Distance Education Alliance Research Plan	3
SECTION II: RESEARCH ARTICLES		7
Cluster 1: Adoption of an Innovation		9
Omalley Abel and Meredith Hays	Use of the ICN: A Look at High School Principals in Phase III	11
Abou-Dagga, Sanaa and Herring, Mary	Teachers' Training in Distance Education and Their Willingness to Use the Technology After the Completion of Inservice Training	15
Fagan, Patsy J.	Assessment of Distance Education Implementation in Iowa: Concerns and Indicators of Success	23
Merkley, Donna J., Bozik, Mary, and Oakland, Kathy	Investigating Teacher Change Associated with Distance Learning in Education	31
Cluster 2: K-12 Teacher Attitudes Toward Distance Education		43
Bigilaki, Lemonia Torrie, Margaret and Hausafus, Cheryl	Family and Consumer Sciences Secondary School Teachers' Orientations Toward Distance Education Technology for Curriculum Delivery	45
Herring, Mary	Development of Design Guiding Principles for Constructivist-Based Distance Learning Environments	57
Miller, Greg	Usefulness of the Iowa Communications Network for Delivering Instruction in Secondary Agriculture Programs	63
Sereg, Patricia Anne	Educators Adoption of the Internet	69
Simonson, Donald	Applied Vocal Music Instruction on the ICN	73
Torrie, Margaret and Hausafus, Cheryl O.	Utilizing Distance Education to Deliver Secondary School HIV/AIDS Education	79
Torrie, Margaret and Miller, Wade W.	An Assessment of Iowa Secondary Vocational Teachers' Attitudes Toward Using Interactive Distance Education Strategies to Support Competency-Based Curriculum Reform Efforts	85

Cluster 3: The K-12 Distance Education Experience 91

Adamson, Jane Mason	Gender and Group Gender Composition as Factors in Interaction Patterns and Attitudes of Students Working Cooperatively with Interactive Multimedia	93
Downs, Dennis A.	Cedar Falls Harp Project: Music Instruction on the Fiber Optic Telecommunications Network	99
Fast, Michael	Assessing the Roles of Participants in Multi-Site, Foreign Language Instruction: Interaction in a Technology-Mediated Environment	103
Schoenfelder, Krista R.	Student Involvement in the Distance Education Classroom: Teacher and Student Perceptions of Effective Instructional Methods	115
Simonson, Donald	The Iowa Communications Network as a Vehicle for the Delivery of Applied Instrumental Music Instruction	123
Tillotson, John W. and Henriques, Laura	Teaching Science at a Distance: The Teacher's Perspective	129

Cluster 4: Distance Education in Postsecondary Institutions 137

Allen, Gayle	Virtual Field Experience Utilizing Computer Networks and Interactive Television	139
Baker, Molly Herman	Distance Teaching with Interactive Television: Strategies that Promote Interaction with Remote-Site Students	143
Doerfert, David L. Miller, Wade W.	Using Diaries to Assess the Learning Needs and Course Performance of Students Served by Three Instructional Delivery Means	153
Rude, Jodi Lynn	Community College Demographics and Innovativeness Toward Distance Education: Is there a Correlation?	163
Sorensen, Christine K.	Attitudes of Community College Student Toward Interactive Television Instruction	167
Taylor, Debra, Torrie, Margaret and Hausafus, Cheryl	An Assessment of Family and Consumer Science Educators' Knowledge, Interest and Attitude Toward Adult Education Delivery via the Iowa Communications Network	185
Westbrook, Thoimas S.	A Longitudinal Profile of the Content Learning and the Attitudes of Adults Enrolled in a Graduate Degree Program Utilizing The Iowa Communications Network	191

SECTION III: LITERATURE REVIEW 199

Hanson, Dan	Distance Education: Definition, History, Status and Theory	201
Maushak, Nancy	Distance Education: A Review of the Literature	221
Sorenson, Christine K.	Distance Education: Operational Issues	235
	Distance Education: A Selected Bibliography	246

Integration of Technology and Telecommunications

Integration of Technology and Telecommunications

Goal 7: Integration of new technology and telecommunications incorporating best practices for teaching and learning will be piloted in selected Iowa schools.

The main objective for 1996-97 under this goal was the selection of a pilot school to serve as a "test bed" for new technology and telecommunications applications that will result in improved teaching and learning. Assistance will be provided in three areas:

1. planning,
2. funding for purchase of software, hardware, connectivity, and
3. staff development for educators.

The project was successful in funding an attendance center to serve as a laboratory for testing new technology's potential to improve teaching and learning. The proposal process successfully encouraged applications from around the state that reflected a variety of content areas.
The pilot school was successful in achieving two of the six project objectives.
Materials, tables, and graphs related to the Pilot School Project may be found at the end of this section.

Accountability

- Requests for proposals (RFPs) to solicit pilot school applications were distributed across the state to all public and nonpublic school districts. The ICN was used to connect 15 sites for a questions and answer period.
- 34 proposals were submitted; two were rejected for not meeting the guidelines; one was selected for funding.
- Pilot school staff members worked collectively to develop grade/course expectations for 10th grade Social Studies and Language Arts.
- A three-day workshop was conducted involving all 10th grade Social Studies and Language Arts teachers. Topics included Group Investigation, Concept Attainment, Inductive Thinking, and Jurisprudential and werre aligned with Information Processing.

Effectiveness

- Applications were received from 11 of 15 AEAs; Of the 32 school districts submitting acceptable applications: 100% had Internet access; 94% had ICN classrooms; 59% were in counties with a population base under 20,000; 53% had at least 25% of enrollment eligible for free and reduced lunch; and 34% were Chapter 1 concentration districts.
- A seven member review team reviewed, read, and scored the proposals based on the six criteria identified in the RFP. The team included two project directors from Star Schools; representatives from an AEA, a community college, Iowa Department of Education, and a business; and a grants coordinator. A site visit was made prior to officially offering the Pilot School Grant.
- The attendance center selected for funding received a score of 96.25 out of a possible 100. Scores ranged from 38.75 to 96.25. The average score was 72.26.

Impact

- Two focus groups were conducted to collect baseline data on teachers' opinions about the project. A total of 12 teachers attended the 45 minute sessions.
- Current use of technology was limited, consisting mainly of word processing and some email.
- The lack of access to technology in their classrooms made the use of technology "challenging".
- Teachers indicated their belief that the project will have positive outcomes for both them and their students.
- Several barriers were identified that will need to be addressed by project leaders to insure the success of the project: communication, assessment and academic freedom, prep and planning time, and support.
- Other measures of impact will be examined during the second year of this project.

Organizational Contexts

This project was running a little behind schedule due to some problems beyond the scope of project management. For the most part these have been resolved.

- Because of a scheduling change, teachers had less planning time than originally planned. This had an impact on the amount of time available for staff development.
- Connectivity was not completed and hardware did not arrive in the allotted time.

Integration of Technology

Chronology of Events: Pilot Schools Project
Cover Letter: Pilot School RFP
Request For Proposals: Pilot School
Information for Grant Reviewers
Review Form: Pilot School
Table: Pilot School Applications: Summary of District Information
Description of Project: Ames Pilot School
Press Release: Pilot School Grant Award
Ames Pilot School Focus Groups: Teacher Introduction, Questions, and Results

Star Schools Initiatives - 1996-97
Pilot Schools Project
Chronology of Activities

November 5, 1996	Requests for Proposals distributed to Iowa Public and Nonpublic School Systems.
November 14, 1996	Request for Proposal Question and Answer Session held utilizing the Iowa Communication Network System in 15 sites across the State.
December 2, 1996	Application Proposals due to the Iowa Department of Education. 34 proposals received as of 5:00 p.m. on this date.
December 17-18, 1996	Thirty-four (34) proposals reviewed, read and scored by a seven member review team. The members included: Terry Higgins, Grants Coordinator and Writer Afton, Iowa Kathleen Johnson Technology & Information Educational Services (TIES) Roseville, Minnesota Dennis McElroy, Technology Consultant Iowa Department of Education, Des Moines, Iowa Gwen Nagle, Project Director Iowa Public Television, Johnston, Iowa Michele Payne, Distance Learning Director Kirkwood Community College, Cedar Rapids, Iowa Jon Wibbels, Media and Technology Consultant Western Hills AEA, Sioux City, Iowa Dr. Tom Micek, Star Schools Pilot School Project Leader Iowa Department of Education, Des Moines, Iowa
January 8, 1997	Site Visitation made to Ames High School by Dr. Tom Micek, Dennis McElroy, and Allen Waterman, Technical Specialist from Iowa Public Television.
January 9, 1997	Project selection and validation meeting held at Iowa Public Television with site visitation team members and Dr. Pam Johnson, Star Schools Director, and Dr. Rich Gross, Star Schools Assistant Director.
January 21, 1997	Pilot Project Teams from Star Schools and Ames High School met at Heartland Area Education Agency in Johnston, Iowa to officially offer Pilot School Grant to Ames High School as the receiving school for the Ames Community School District.

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF EDUCATION
TED STILWILL, DIRECTOR

Dated Material, Please Review As Soon As Possible

November 5, 1996

Dear Colleague:

Enclosed please find a copy of the Star Schools Grant Request For Proposal for the Pilot Schools Project. This is a new Star Schools initiative this year which will result in the selection of one school to be designated as the Pilot School for technology applications over the next 3 years. The school selected will receive $300,000 during the remainder of this year's Star School's grant period (until September 30, 1997) to help with implementing technology-based programs.

This RFP has specific application and selection criteria. Please review the application criteria to determine whether or not a school in your district is eligible to apply. Also note the selection criteria. The required narrative is brief so it must directly address the issues presented in the selection criteria.

Also, please note that there will be a Q&A session via the ICN on November 14th. Please refer to the RFP for details about whom to call for more information. Thank you for your consideration.

Sincerely,

Rich Gross
Office of Technology

233
GRIMES STATE OFFICE BUILDING / DES MOINES, IOWA 50319-0146
FAX (515) 242-5988

Iowa Star Schools Grant

Request for Application

Pilot School

Criteria release date: November 1, 1996
Proposal Due Date: 5:00 pm, December 2, 1996
Award level: Approximately $300,000
Number of awards: Anticipated to be 1 (one)
Start Date: No later than January 2, 1997
Completion Date: Star Schools funding to be completed September 30, 1997; partnership with Department of Education through September 30, 1999

Background information:

The Iowa Distance Education Alliance (IDEA) consisting of educational partners in state of Iowa has been awarded a US Department of Education StarSchools grant (R203F50001-96). The purpose of this grant is to demonstrate the use of a statewide fiber optics telecommunications network to improveinstruction. In addition, the Iowa Department of Education is specifically interested in improving instruction in subject areas such as mathematics, science, communications skills and applied learning.

As part of the Star Schools grant, the Iowa Department of Education intends to select an Iowa school attendance center to serve as a "test bed" for new technology and telecommunications applications that will result in improved teaching and learning. This school will receive assistance in the form of planning, funding for purchase of hardware, software, and connectivity, as well as staff development for educators in the building.

The pilot school selected should be one attendance center within a district. (In the case of a self-contained K-12 district with one attendance center, the pilot may be an entire district). Because the purpose of the grant is to demonstrate the instructional aspects of the statewide telecommunications network (Iowa Communications Network), the building should either be connected directly to the ICN or should be linked to the ICN via a high-speed connection (local area network or wide area network).

Project Objectives:

1. To demonstrate integration of an effective school improvement plan (280.12/280.18) with technology planning and to implement the plan to positively impact student learning.

2. To demonstrate the use of telecommunications and technology applications which support the educational goals of the school district and the attendance center.

3. To serve as a "test bed" for technology and telecommunications hardware and software innovations and for instructional strategies utilizing these technologies.

In order to achieve the objectives, the Iowa Department of Education, Iowa Public Television and other regional and statewide resources (AEAs, higher education, etc.) will work with the district and attendance center to provide needed technical support and expertise.

Criteria for selection:
Selection is a two step process. For the first step each applicant must meet the application criteria. Applicants not meeting the application criteria will not be considered further. Applicants meeting the application criteria will be reviewed by the selection team. The selection team will rate each applicant based upon the selection criteria. Selection will be based upon the awarding of points as described below.

Budget:
The budget for this project and a listing of approved expenditures will be negotiated with the winning applicant and is not a part of the selection criteria.

A.) Application Criteria
1. The attendance center is part of an accredited Iowa school district (public or non-public).

2. The district/attendance center agrees to work with personnel in the Iowa Department of Education, Iowa Public Television, and other regional/statewide partners to implement best practices and to incorporate new educational technologies.

3. The attendance center meets one of the following: a. is directly connected to the Iowa Communications Network (ICN) or

b. is scheduled to be connected to the ICN by January 2, 1997 or c. is linked to the ICN via a high-speed local area network or wide area network or d. the district agrees to provide, at its own expense, a local area or wide area network connection

to an ICN point of presence (POP) and agrees to have the connection completed by January 2, 1997

4.) The district/attendance center agrees to be part of this project for an additional two years beyond the end of the grant period.

B.) Selection Criteria: (Note: Responses to each of the criteria will be rated according to a point system. There is a maximum of 100 points)

1. To what extent is evidence provided to show that the district/attendance center will meet the objectives of this project as outlined in the Objectives Section above. (20 points)

2. To what extent is there evidence of broad-based support for the pilot school concept as outlined in this request for application (agreement by the school board, district and building-level administration, and teachers' organization). (10 points)

3. To what extent does the district/attendance center demonstrate effective school improvement planning (for example, 280.12/280.18) and implementation of this plan. (20 points)

4. How well does the district/attendance center demonstrate a commitment to use of educational technology to improve student achievement and to support the district's school improvement plan. (20 points)

5. How well does the district/attendance center demonstrate an on-going commitment to staff development in best practices for teaching and learning. (20 points)

6. To what extent does the district/attendance center provide evidence that the use of technology for improved student achievement is an important goal of the district, and that district/attendance center resources will be focused on this goal after the pilot school period ends. (10 points)

Expected Activities beyond end of the grant funding period (September 30, 1997):

The pilot school will continue to serve as an important resource for Iowa schools beyond the funding period. It is expected that during the funding period the selected school will make significant progress toward meeting the objectives as outlined in this proposal. The selected district will agree to continue working toward those objectives beyond this funding period.

Although additional support might be provided to the district in the future, this funding cannot be guaranteed. However, it is anticipated that other school districts,

515-242-3182 for the scheduled ICN location nearest you. Please refer to the "Star Schools Pilot School Project Q&A" when you call.

It is expected that project evaluations will be conducted during December, 1996, with announcements concerning funding to be made by the end of the year. It is expected that projects will commence in early January, 1997. Successful applicants will be expected to complete an agreement with the Department of Education.

Information for Grant Reviewers

1. You will work on one of three 2 member reading teams. Each reader will analyze approximately 11 grant applications. Reviewers may be asked to serve as a third reader for additional applications for discrepancy analysis purposes.

2. Proposals will be evaluated on a point system by the reading teams. A maximum of 100 points can be awarded for a proposal. Two readers will rate each of the six criteria using a rating scale of 1-4 for each criteria. A third reader will rate the criteria if there is greater than a 2 point discrepancy between the two original readers for any of the six criteria.

3. On a ten point criteria, a 1.25 weighting factor will be assigned for each point awarded per reader. On a twenty point criteria, a 2.5 weighting factor will be assigned for each point awarded per reader.

5. Readers will not be assigned applications from schools that they may have a direct affiliation with in the regular professional role.

4. Tom Micek, Rich Gross and Pam Johnson will be responsible for reviewing and rating the application criteria for each grant proposal received. The application criteria include:
    1. Attendance center part of accredited Iowa School District;
    2. The district/attendance center agrees to work with personnel in the Iowa Department of Education, Iowa Public Television, and other regional/statewide partners to implement best practices and to incorporate new educational technologies.
    3. The attendance center meets one of the following:
        a. is directly connected to the ICN;
        b. is scheduled to be connected to the ICN by January 2, 1997;
        c. is linked to the ICN via a high speed local area network or wide area network; or
        d. the district agrees to provide, at its own expense, a local area network connection to an ICN point of presence (POP) and agrees to have the connection completed by January 2, 1997.
    4. The district/attendance center agrees to be a part of the project for an additional two years beyond the end of the grant period.
    5. Proposals limited to a total of 7 pages (plus support materials) as follows: Cover sheet (1 page), Narrative (no more than 6 pages), and Support Materials.
    6. Original and five copies of the proposal submitted by applicant.

Iowa Star Schools Grant
Pilot School

Applicant: _____

Reviewer: _____

Selection Criteria:

1. To what extent is evidence provided to show that the district/attendance center will meet the objectives of this project as outlined in the Objectives Section. (20 points)

   4 - All three project objectives are evidenced with detail in the application.
   3 - Two of the three project objectives are clearly evidenced in the application.
   2 - One of the three project objectives is clearly evidenced in the application.
   1 - None of the project objectives are clearly evidenced in the application.

   Points assigned to criteria 1 = _____

2. To what extent is there evidence of broad-based support for the pilot school concept as outlined in this request for application (agreement by the school board, district and building-level administration, and teachers' organization). (10 points)

   4 - Strong evidence of contributors and supporters including the Board of Education, administration, teachers, and other outside agencies is included in application.
   3 - Evidence of contributors and supporters including the Board of Education, administration and teachers is provided.
   2 - Evidence of support from administration is provided.
   1 - Evidence of support is not adequately included in application.

   Points assigned to criteria 2 = _____

3. To what extent does the district/attendance center demonstrate effective school improvement planning (for example, 280.12/280.18) and implementation of this plan. (20 points)

   4 - The school improvement plan contains learning goals that clearly address teaching and learning. The goals are clear, measurable, integrate technology and are closely coupled to total district reform and school improvement initiatives.
   3 - The school improvement plan contains learning goals that are both clear and comprehensive and measurable but does not effectively and completely address the integration of technology.
   2 - The school improvement plan is tied to learning goals and objectives. The objectives do not appear to be easily measured and /or do not adequately address technology integration.
   1 - A school improvement plan exists but is limited in depth and breadth. Learning goals are not strongly evident, and assessment, measurement and technology integration are not addressed.

   Points assigned to criteria 3 = _____

4. How well does the district/attendance center demonstrate a commitment to use of educational technology to improve student achievement and to support the district's school improvement plan. (20 points)

4 - Regular planned access to technology as both a means of integrated instruction and tool is highly evident. Extensive use of computers, telecommunications and networked resources are highly evidenced.
3 - Student access to technology as an important component in integrated instruction and learning is somewhat evident.
2 - Regular use of technology takes place at one or more grade levels on a scheduled basis, but not in a consistent and integrated manner.
1 - Lack of evidence exists for planned and regular use of technology for instruction and learning.

Points assigned to criteria 4 = _____

5. How well does the district/attendance center demonstrate an on-going commitment to staff development in best practices for teaching and learning. (20 points)

4 - The instructional and administrative staff are pervasive users of technology, and are advocates for continued technology training and development of for all personnel. Staff development and training are an integral part of District's school improvement activities at both the site and district levels.
3 - The instructional and the administrative staff are well-trained and knowledgeable in the use of technology. Staff development opportunities are consistently provided for most staff.
2 - District and site sponsored technology training is available and intermittently provided for staff.
1 - Formal support for teacher training and development appears minimal.

Points assigned to criteria 5 = _____

6. To what extent does the district/attendance center provide evidence that the use of technology for improved student achievement is an important goal of the district, and that the district/attendance center resources will be focused on the goal after the pilot period ends. (10 points)

4 - Comprehensive plans for the use of technology are reviewed and revised often and instructional delivery is dependent on integrated use of technology. Clear evidence of implementation of planning is contained in application.
3 - Technology planning for teaching and learning is an identifiable part of district and site planning.
2 - Formal plans to facilitate the use of technology for teaching and learning are somewhat evident.
1 - Limited formal plans and procedures for use of technology in district or at site are evident.

Points assigned to criteria 6 = _____

Significant strengths in this application:

Pilot School Applications: Summary of District Information

AEA #	Iowa School District	Chapter 1 Concentration District	Minority Enrollment	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch	County Poverty Rate	Rural County	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site
1	New Hampton				25%-33%		2,500-19,999		1993	X	P
2	Charles City	X			33.1%-50%	15.1%-20%	2,500-19,999		1996	X	M, P
2	Lake Mills						2,500-19,999		1996	X	M
3	Emmetsburg	X			25%-33%	20.1%-25%	2,500-19,999		1996	X	P
3	Harris-Lake Park	X			25%-33%		2,500-19,999	X	1996	X	P
3	Okoboji						2,500-19,999		1996	X	P
3	Spirit Lake						2,500-19,999		1993	X	
5	Pocahontas Area	X			25%-33%		<2,500		1993	X	
5	Storm Lake		>3.6% >250 students	X	33.1%-50%		2,500-19,999			X	
6	BCLUW						2,500-19,999		1996	X	M
9	Calamus/Wheatland							X	1996	X	
9	Clinton		>3.6% >250 students		25%-33%				1996	X	
9	Davenport		>3.6% >250 students	X	33.1%-50%	15.1%-20%			1996	X	S, P
10	Cedar Rapids		>3.6% >250 students	X	25%-33%				1996	X	M, P
10	College		>3.6% <250 students						1996	X	M
10	H-L-V						<2,500	X	1995 - 1, 1996 - 2	X	M, P
10	Iowa City		>3.6% >250 students	X					1996	X	P, S

Pilot School Proposals: Summary of District Information

AEA #	Iowa School District	Chapter 1 Concentration District	Minority Enrollment	Limited English Proficiency (>25 Students)	Percent Eligible for Free and Reduced Lunch	County Poverty Rate	Rural County	District Enrollment <600	ICN Classrooms in District	Internet Site	Curriculum or Exemplary Project Site
11	Ames		>3.6% >250 students	X					1993	X	M, M, P
11	Earlham					15.1%-20%	2,500-19,999	X	1996		M
11	Martensdale-St.Marys							X	1996	X	
11	Norwalk								1996	X	M, P
11	Urbandale		>3.6% <250 students	X					1996	X	M, P
11	West Des Moines		>3.6% >250 students	X					1995/1996	X	M, M
12	Akron Westfield				25%-33%		2,500-19,999			X	
12	Battle Creek-Ida Grove	X			33.1%-50%		<2,500		1995	X	
12	Maple Valley	X			25%-33%	20.1%-25%	2,500-19,999		1993	X	
13	Council Bluffs		>3.6% >250 students	X	33.1%-50%				1996 - 3	X	P
13	Fremont-Mills	X			25%-33%	15.1%-20%	<2,500	X	1997	X	
13	Griswold	X			25%-33%	15.1%-20%	2,500-19,999		1996	X	
13	Tri-Center	X							1996	X	
14	Bedford	X			33.1%-50%	20.1%-25%	<2,500		1993	X	
14	Mount Ayr	X			33.1%-50%	20.1%-25%	<2,500		1993	X	

Ames Pilot School
Description of Project

The main goal of the Ames Pilot School proposal was to develop an integrated Social Studies/Language Arts program supported by technology for 10 th grade. The learning outcome stated was: All Ames High School students will work together positively to access, process, and communicate information as they develop Social Studies/Language Arts skills. The pilot project is intended to include nearly 100% of AHS 10th grade students.

Objectives included:

1. development of grade/course level expectations for 10th grade Social Studies and Language arts;
2. staff training on Group Investigation, Concept Attainment, Inductive Thinking and Jurisprudential, aligned with Information Processing;
3. completion of the technology environment;
4. development of integrated Social Studies/Language Arts units of study that utilize technology support;
5. pilot testing and implementation of Social Studies/Language Arts units by developers; and
6. implementation of Social Studies/Language Arts units by all 10th grade Social Studies/Language Arts teachers.

Iowa Department of Education Press Release
Pilot Schools Grant Award

(Des Moines, IA, January 15, 1997)

School Tech Test Site Chosen

An Iowa high school will become a laboratory for testing new technology's potential to improve teaching and learning. Ames High School has been awarded a federal Star Schools Grant to demonstrate the use of the Iowa Communications fiber optic Network and other telecommunications technology in boosting school improvement efforts.

The Iowa Department of Education's Office of Technology and Iowa Public Television's Educational Telecommunications Division were responsible for the grant selection process. Statewide teams of educators selected Ames high school from among 34 applications.

"Ames High School will serve as a test bed for innovative uses of telecommunications hardware and software," says Tom Micek, Office of Technology, Iowa Department of Education. "We hope to demonstrate for *all* Iowa schools the importance of integrating technology planning and staff development."

Ames High School will receive Star Schools grant money totaling up to $300,000 before September 30, 1997, with the funds used for purchase of hardware, software, and connectivity technology. The Iowa Department of Education and IPTV will also assist the school with technology planning and staff development.

The pilot school will continue to serve as a resource and demonstration site for all Iowa schools beyond the Fall of 1997.

For more information, contact: Tom Micek, Office of Technology, Iowa Department of Education, 515-399-6588, tmicek@max.state.ia.us; Klark Jessen, Communications Specialist, Iowa Department of Education, 515-281-5651, kjessen@max.state.ia.us

Introduction for Teacher Focus Groups

Thank you for attending this discussion today. We really appreciate your willingness to participate. First, I'd like to explain briefly why we are here today and what will happen during this session.

Purpose of the Study and Nature of the Organization Conducting the Study
Your school district has asked the Technology Research and Evaluation Group, part of the Iowa State University College of Education, to work with them as Ames High School implements its technology plan for the Pilot Schools Project. We are here to listen to what you have to say about the use of technology in the classroom.

Taping, Confidentiality, and Use of Data
Your responses will be confidential. We will not use any names in any reports we provide to the school. The information we collect from the discussion today will be combined and catagorized, and used to help track the changes that are likely to occur as the technology plan is implemented at Ames High.

You may have noticed the tape recorder we have set up. We would like to tape record our discussion today so that as we summarize what you have to say, we can be sure that we didn't miss any of the key points. Only staff members at the Technology Research and Evaluation Group office will have access to the tapes. If no one has an objection, we'll begin the tape now.

Ground Rules and Group Directions
We want to emphasize that we are here today to learn from you, so we don't anticipate doing much of the talking. We'll ask a few questions, and as you respond, we want you to talk to each other. If your viewpoint is a bit different, that's fine, that's what we want to hear. Remember, there are no right or wrong answers. We believe everyone has something important to say.

To make sure we all get an opportunity to hear each one of you, we do have four ground rules: (1) only one person speaks at a time; (2) no side conversations; (3) everyone participates and no one dominates; and (4) all experiences are equally important and equally valid.

Ice Breaker
Now, let's get started. Let's go around the room and let each person introduce themselves by telling us your name, what subjects you teach, and where you would go if you could choose anywhere for a summer vacation. I'll start.

Ames High School Teacher Questions

11:00 - 11:10
Scripted introduction

11:10 - 11:20

1. How are you using technology now?
in the classroom
in the curriculum
outside of school

11:20 - 11:30

2. How do you think the Pilot Schools Project will change what you're doing in the classroom in the future?

your role as the teacher
what you teach
how you teach
what students learn
how students learn

11:30 - 11:40

3. What is your greatest concern about the implementation of the Pilot Schools Project?

barriers to success
staff development plans
information available to teachers about plans

11:40 - 11:45

4. Is there anything else related to the Pilot Schools Project that you would like to comment on?

Pilot School Project
Teacher Focus Group Results
Spring 1997

Introduction

In January 1997 Ames High School received the Iowa Star Schools Pilot School Project Grant. The grant provides $300,000 between January 1997 and the end of August 1997 to develop an integrated Social Studies and Language Arts program supported by technology for 10th grade students. Iowa State University College of Education's Technology Research and Evaluation Group (TREG) conducted focus groups with the twelve Ames High School teachers assigned to participate in the Pilot School Project.

The basic goal of the focus group sessions was to obtain baseline data in three areas: how teachers are currently using technology in the classroom and curriculum, how they think the infusion of technology will change their classroom practices, and teachers' concerns about the implementation of the Pilot Schools Project.

Description of Study

Focus groups were conducted on May 21, 1997 at Ames High School to collect baseline data on teachers' opinions towards technology and its use in the classroom and potential barriers to success. The participants divided themselves into two groups of six for the focus group sessions. The sessions were conducted concurrently, and due to time constraints were limited to about 45 minutes. Each group discussion was tape recorded and transcribed, and the information was organized and categorized in order to identify patterns and common themes.

Study Findings

How Are Teachers Using Technology Now?

Teachers report they were primarily using word processing programs, for their own purposes and in the classroom. Most teachers were using QuickMail within the district or another form of Email, both at school and at home. A number of teachers were asking students to use the Internet for research purposes, but some had reservations about that resource because "...it's hard to evaluate what's valid and what's invalid on the Internet". Some teachers indicated they'd like to use technology more

often in their classroom now, but it is challenging. "Most of us don't have computers in our rooms so it's very difficult." "I had to sign up eight weeks ahead of time to get it (computer time) because we don't have computers in our rooms." One teacher has students make extensive use of computers in the curriculum, including the use of HyperStudio, PowerPoint, Pagemaker, and Internet, in addition to word processing.

How Do You Think the Pilot Schools Project Will Change What You're Doing in the Classroom in the Future?

There are two views evident in the teachers' visions for the future. One view seems to focus on the technology, and ways to use it in the classroom. The other view is a more student-centered approach -- looking at how the technology can help the students explore and learn.

The teachers who look at the changes in terms of the technology appear to be focusing on the impact it will have on their day-to-day lives. "We've been working just the last few days doing slide shows on Clarisworks, and so my quiz is just right there and I can roll through it again and then I'd roll through the answers...and then you could bring in other things like PowerPoint or Empower or even HyperStudio to do the same thing, so it looks snazzy."

Another teacher looks at the technology as a way to make classroom time more efficient: "I'm hoping that perhaps when someone doesn't quite get their research finished up while we're down in the media center or something like this, that this will be a way of taking care of it in the room and not having to try to work it into their schedule ... all the students are very busy, too."

Those who are looking at the future in terms of the student's educational opportunities appear to be focusing on how the learning process may change because of the infusion of technology. "I'm hoping that I can have a student put a question on the computer and maybe get 10 reactions to it, 10 in-depth reactions, or put a piece of text that they've created on the computer and have students react to that, so that it can begin to open it up even more in terms of what's there, and I can imagine this would happen within a class, this could happen between classes, you could have this happen between Ames High and (a Des Moines school), or it might even happen between my classroom and an author out in (another state)."

Another teacher spoke of how technology will open new avenues of dialogue in the classroom. "One of the things that I already notice is a change in my thinking. It's not a matter of giving up control of the classroom as much as it is giving up control of a content area...I find it incredibly exciting because instead of a cap on a content area, I see more and more questions that I have and that kids have and that technology may very well be the way of getting these questions answered."

In general, the teachers seem to look to the future optimistically and with enthusiasm. They tend to believe the Technology Pilot Project will have positive outcomes for them and for the students.

The Most Serious Barrier to Success: Communication

The major barrier to success, as identified by the participating teachers, was communication. There was a strong undercurrent of frustration evident. "Teachers have no ownership in this. We were just told this was something we were going to do. Plus the fact, as teachers, we have been trying to communicate with administrators what we need and how we'd like to proceed and that has been ignored."

A number of teachers voiced concerns about the lack of interaction between administration and teachers. "I feel this is very top-driven. It's a wonderful opportunity for us...but we have had this given to us and then we deal with it. They can't answer our questions but they chose us to give it to."

It seemed many of the other concerns voiced by the teachers stemmed from this perceived lack of communication between the administration and the participating teachers. They had a number of concerns about assessment, academic freedom, technology support, and planning time that will be resolved as communication lines are improved.

Other Perceived Barriers to Success:

Assessment and Academic Freedom

Teachers seem to be interested in exploring a new approach to teaching, but are concerned that the new approach will be measured by the old assessment techniques. "I'm not sure that our school district is ready at this point to say 'All right, you take your hundred and fifty students and just allow them to learn'. No matter how much they're learning I think our district's going to turn around to us and say 'Now we're going to have this comprehensive assessment in which all your students must know this, this, and this.'"

Some teachers also fear this project means they will lose the power to make decisions in the classroom. "My greatest concern is that administrators and technology people will dominate how we should teach because they think they know what's best for us."

Prep and Planning Time

The recent change district-wide in teacher prep periods combined with the lack of communication about the pilot school project is creating concern about how this project will work on a day-to-day basis. "This project is going to take a terrific amount of planning and teaming and working together. And it just so happens that our central administration feels we need less time to plan and teach. And we're not allowed any team planning time." Most teachers understand that the change in prep periods is an issue unrelated to the Pilot School Project, but some are concerned about feeling the impact of that change doubly because of the Project. "There could be some increased anxiety in trying to juggle well all of the expectations that are put upon us because we are all professionals and have a desire to do our job well and give the students the best 43 minutes that they can have. In a given day I fear that some of the things I want to preserve about my teaching might be sacrificed; and I'm not quite ready to sacrifice."

Support

"Once we get all this equipment in here, are we going to have people who are going to be able to keep it functioning correctly?" Some teachers are worried that after planning a curriculum based on technology, they will be forced to become a computer technician if they have any hope of carrying out the planned lessons. Teachers indicated this fear is based on the current computer support situation at Ames High.

Summary

This is an exciting and frightening time for these teachers. They're optimistic about the future, they have a generally positive perspective on the power of technology and its role in the Pilot School Project, and they feel the future will be better than the present.

The reality is that is between now and the future, change is necessary. Change is stressful under any circumstances. When you combine change with a lack of communication, whether it is perceived or real, problems are inevitable.

An increase in two-way communication will help alleviate the stress these teachers are feeling. They have some very basic questions about the project and their role in it that need to be answered. In addition, some of these teachers have innovative ideas for incorporating technology into their curriculum. They need to be assured that their ideas are valued and appreciated.

These teachers represent a wide range of technology proficiency levels. Despite their differences now, each seems to be eager to do what is necessary to explore the available technology, and find ways to improve the learning options for the students in their classrooms.

National Star Schools Goals and Objectives


National Star

National Goals

As part of the program performance plan for Star Schools, the US Department of Education developed four objectives to be used at the national level for evaluating all Star Schools Projects. The four areas to be addressed include: educational opportunities, professional development, increased access to distance education, and research and dissemination.

Educational Opportunities

Goal 1: Deliver challenging and engaging content in core subjects.

Indicators related to this goal include:

1. alignment with standards,
2. increased availability, and
3. increased enrollment at both the high school and elementary levels.

- The development of the multimedia curriculum projects has been based on professional organization standards as well as state curriculum standards. Staff development on content standards were held before units preparation began.
- The curricula for the Mississippi River project was developed content specialists with background in both professional organization standards and state and local curricula.
- The pilot school project has relied heavily on the school district curriculum guides and technology plans as program has been developed and implemented.
- There has been an increase in the total number of advance scheduled courses offered on the ICN from only seven in Spring 1994 to 77 in Spring 1997. These classes include advance placement classes as well as classes in foreign language and science that would not be available without the ICN. In Spring 1994 there were two courses in language arts and one each in math, foreign language, fine arts, social sciences, and business/vocational education. In Spring 1997 there were 22 business/vocational courses, 18 foreign language, 12 language arts, eight social sciences, six math, and three fine arts.
- The number of distance learning demonstration activities for K-12 learners has gone from six in 1995-96 to 21 during the school year 1996-97. Approximately 2200 elementary level and 2600 middle/high school level students participated in these activities. This compares with only 561 students during 1995-96. Content areas included science, history and fine arts. These activities provided new educational experiences that would be difficult without using distance education.
- The coordinator of the distance learning demonstration activities reports continued demand for this type of activity. Repeat sessions have been scheduled in an attempt to meet the demand. Contacts for the various activities are included on the Iowa database to encourage teachers to schedule their own activities.
- The ICN continues to be used for hundreds of one-time educational events for students, with an average of over 500 events offered each semester.

Goal 2: Promote excellence in teaching through professional development and integration of new and multiple technologies into the curriculum.

Indicators related to this goal include:

1. increased distance learning resources,
2. technological capability,
3. instructional integration, and
4. improving practice.

- the content areas of science, math and careers. The units and the developers serve as a rich resource for others interested in integrating technology into the classroom.
- Showcase on Educational Technology winners and their students showed how technology was being integrated into their classrooms. Approximately 600 teachers participated in the nine sharing activities. Information related to the Showcase on Education Technology was also made available in print and through the Iowa database.
- 56 computer training workshops were conducted during 1996-97 with almost 1000 individuals participating. Nine room managers' workshops were held with 125 participants.
- Interactive television workshops continued to be offered by universities and AEAs.
- 11 of the 15 AEAs included staff development in their regional plans for Star Schools funding. These included training on the use of the ICN and Internet, technical support training, and computer training. Staff development was also provided by both state and local funding sources.
- Two AEAs provided mini-grants to assist in the development of local curricula integrating technology.
- Five distance education demonstration activities provided staff development. Approximately 180 sites and 500 individuals participated in these activities.
- The increasing number of Showcase on Educational Technology applications identified indicate the integration of technology into the classroom is on the increase. 278 examples of technology use were identified in 1995, 442 were identified in 1996.
- Among the 442 examples identified in 1996, there were 135 for elementary, 135 for middle school, 118 for high school, and 34 for community college. Subject areas included 102 language arts/reading, 87 science, 75 social studies, 45 math, 22 interdisciplinary, 18 fine arts, 14 vocational education, five education, four family/consumer science, and one each foreign language and physical education. The remaining 55 did not fit into any of these categories.
- The Showcase on Educational Technology examples demonstrated use of multiple technologies. Computer software was used the most frequently. Internet and CD ROM were also being used frequently.
- The Teacher Education Alliance provided resources to assist Iowa colleges and universities with activities related to the integration of distance education technology into curricula.
- Informational seminars were held via the ICN to acquaint pre-service teachers with distance education technology and curricula. Two seminars have been conducted, and additional seminars have been requested.

Increased Access

Goal 3: Improved teaching and learning through increased access to distance education.

Indicators related to this goal include:

1. underserved schools,
2. non-traditional settings,
3. improved student performance, and
4. access to modern technologies.

- 73 of 160 (45.6%) Iowa school districtsclassified as Chapter One concentration sites have access to an ICN classroom. 145 (90.3%) of these districts have Internet access.
- 33 of 95 (34.7%) Iowa school districtswhere more than one-third of the students qualify for free or reduced lunches have access to an ICN classroom. 83 (87.4%) of these districts have Internet access.
- 62 of 107 (57.9%%) Iowa school districtswhere one-fourth to one-third qualify for free or reduced lunch have access to an ICN classroom. 92 (86.0%) of these districts have Internet access.
- 40 of 42 (59.7%) Iowa school districtswith minority concentrations have access to an ICN classroom. 64 (95.5%) of these districts have Internet access.
- 17 of 26 (65.3%) Iowa school districtswith concentrations of limited English proficient students have access to an ICN classroom. 25 (96.1%) of these districts have Internet access.
- 16 of 45 (45.6%) Iowa school districtswith county poverty rates (over 20% of 17-year olds and younger living in poverty) have access to an ICN classroom. 40 (88.9%) of these districts have Internet access.
- Reports submitted by the AEAs indicated progress was being made in the integration of technologies. All 15 AEAs reported assisting schools with integrating the Internet including offsetting access costs and purchase of needed equipment.
- The total number of operational ICN interactive classrooms has grown from 142 at the end of 1995 to 447.
- 204 of the operational ICN interactive classroom are in K-12 school districts. This number is changing on almost a daily basis as Iowa approaches the goal of having an ICN classroom in every district by the year 2000.
- All 15 AEAs in the state have an operational ICN classroom which allows them to provide staff development, meetings, and seminars, saving educators both time and money previously spent on travel.
- The Iowa Braille School, the School for the Deaf, the Mennonite School, and a correctional facility are currently being connected.
- A report by Iowa Department of Education showed 344 of 377 (91.2%) Iowa school districts have Internet access.

Research and Dissemination

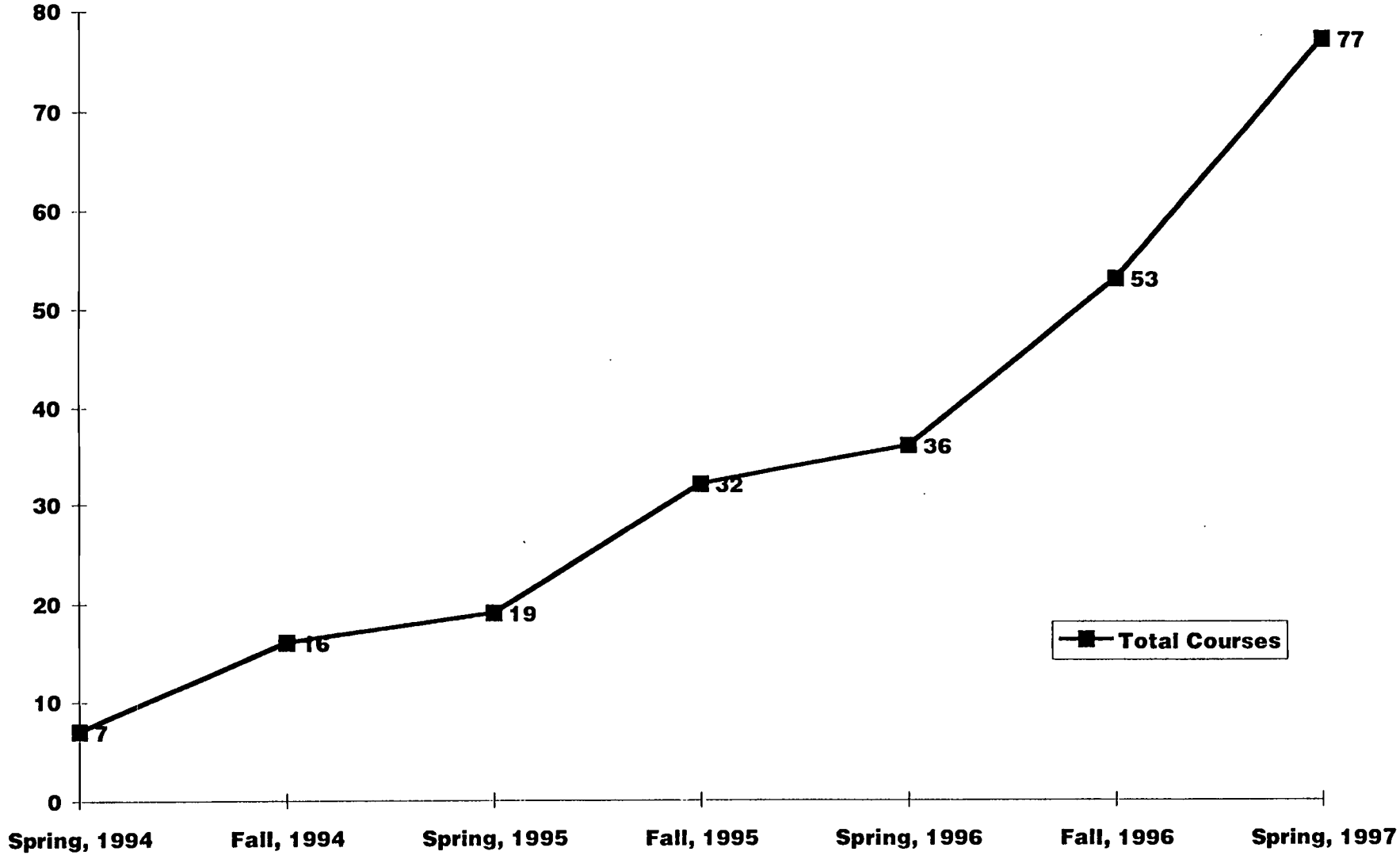
Goal 4: Contribute to the available body of knowledge on use of technology to enhance learning to high standards for all students.

- The Iowa database continues to serve as a resource on distance education. Links to State agencies and professional organizations, and other related sites have been added.
- New sections included "Earth Trails: Loess" (which describes an innovative computer based program that allows students to explore the geology, fauna, and flora of the Loess Hills), and educational want ads where individuals can search possible offerings in distance education. They are also given the opportunity to add "want ads" of their own.
- Approximately 300 copies of the Sampler video have been distributed to date.
- 25,000 copies of "Iowa: A Commitment to Education" were printed and about half have been distributed to date. 200 copies were sent to each AEA and RTC. Others have been distributed upon request.
- A new flier was printed and distributed for the Iowa Database.
- Project personnel and participants have made numerous presentations at both state and national conferences.
- A visioning process is being conducted to explore the future integration of technology in education.
- The TEA provided support for nine action research studies. These studies were conducted by individuals at universities, community colleges and K-12 school districts. Topics explored included using the ICN for GED students, the use of interactive study guides in conjunction with ICN courses, attitudes of Iowa administrators toward the ICN, and motives and factors affecting participation in distance education classes.
- Publications during 1996-97 included five issues of *TEA Times*, a newsletter covering current issues, research, and events related to technology and distance education; a monograph on distance education literature; and an updated Encyclopedia of Research on Distance Education in Iowa.
- Two new videos were produced by the TEA. Star Schools: Three Statewide Approaches examines the technological infrastructure and educational applications of the three Star Schools statewide networks. Representatives from Iowa, Mississippi, and Kentucky discuss the critical decisions made during the planning and building of their networks, and explain why those decisions were made. Costs of Distance Education Systems examines the wide range of options and costs for distance education systems. The video discusses price ranges and the advantages/disadvantages of a variety of approachs to distance education.

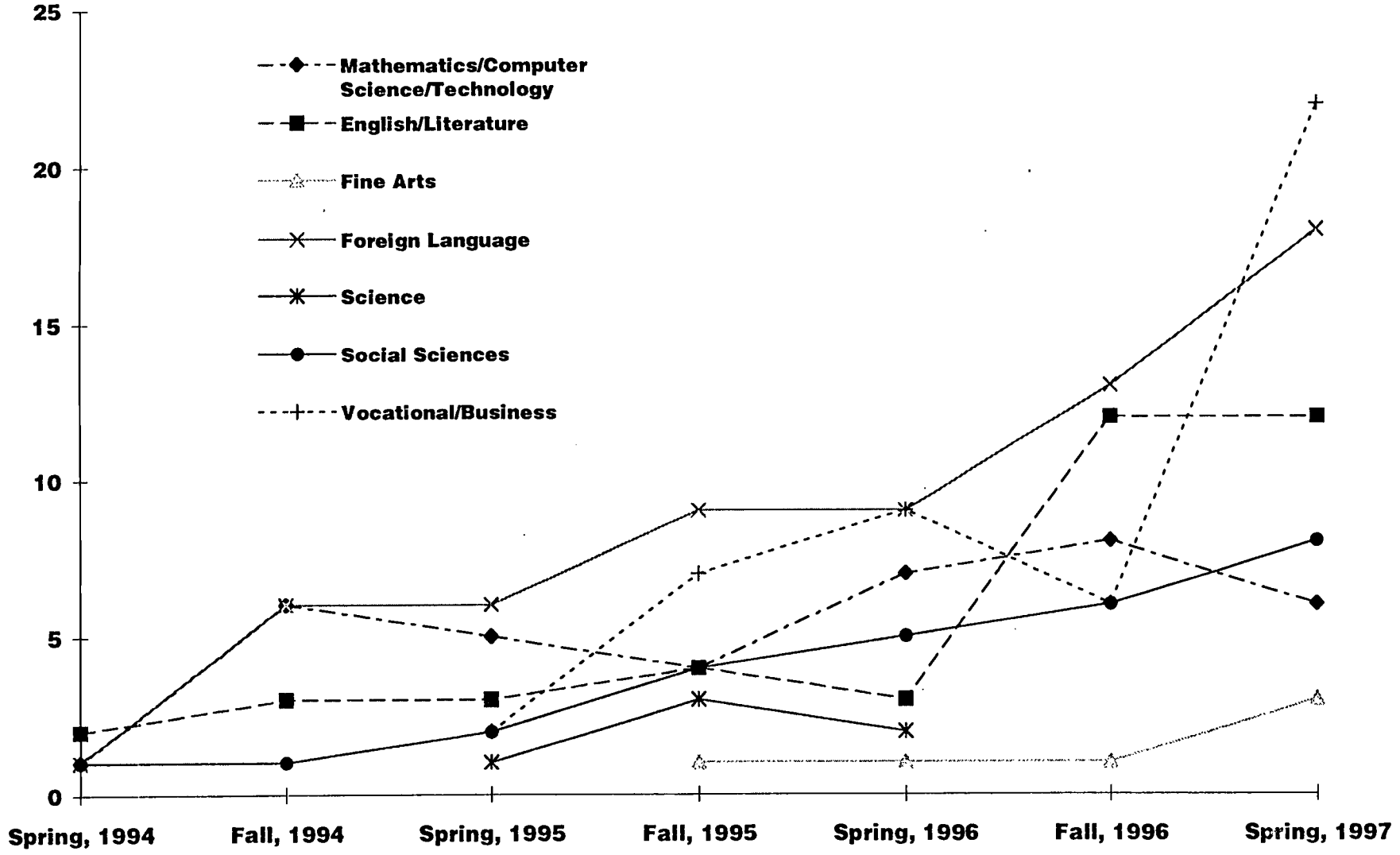
National Star Schools Goals and Objectives

Chart: Total Number of Advance Scheduled Courses on the ICN by Semester
Chart: Advance Scheduled Courses on the ICN by Semester and Subject Area
Table: Advance Scheduled Courses on the ICN by Semester and Subject Area
Table: Summary of Computer Training Workshops
Table: Summary of K-12 Distance Learning Demonstration Sessions
Chart: Comparison of Media Used: Showcase on Educational Technology
Table: Summary of Sharing Activities
Table: Description of Iowa School Districts
Chart: Total Number of Operational ICN Interactive Classrooms
Chart: Location of Operational ICN Classrooms 1993-1997
Chart: Average Number of ICN Sessions per Week by Semester
Chart: Percent of Total ICN Use by Educational Level, Fall 1995 - Spring 1997
Map: Sites on the Iowa Communications Network

Total Number of Advance Scheduled Courses on the ICN by Semester



Advance Scheduled Courses on the ICN by Semester and Subject Area



Advance Scheduled Courses on the ICN by Semester and Subject Area

Subject Area	Spring, 1994	Fall, 1994	Spring, 1995	Fall, 1995	Spring, 1996	Fall, 1996	Spring, 1997	Total
Mathematics/Computer Science/Technology	1	6	5	4	7	8	6	37
English/Literature	2	3	3	4	3	12	12	39
Fine Arts	1			1	1	1	3	7
Foreign Language	1	6	6	9	9	13	18	62
Science			1	3	2			6
Social Sciences	1	1	2	4	5	6	8	27
Vocational/Business	1		2	7	9	6	22	47
other						7	8	15
Total Courses	7	16	19	32	36	53	77	240
Staff Development				7	11	6	6	30

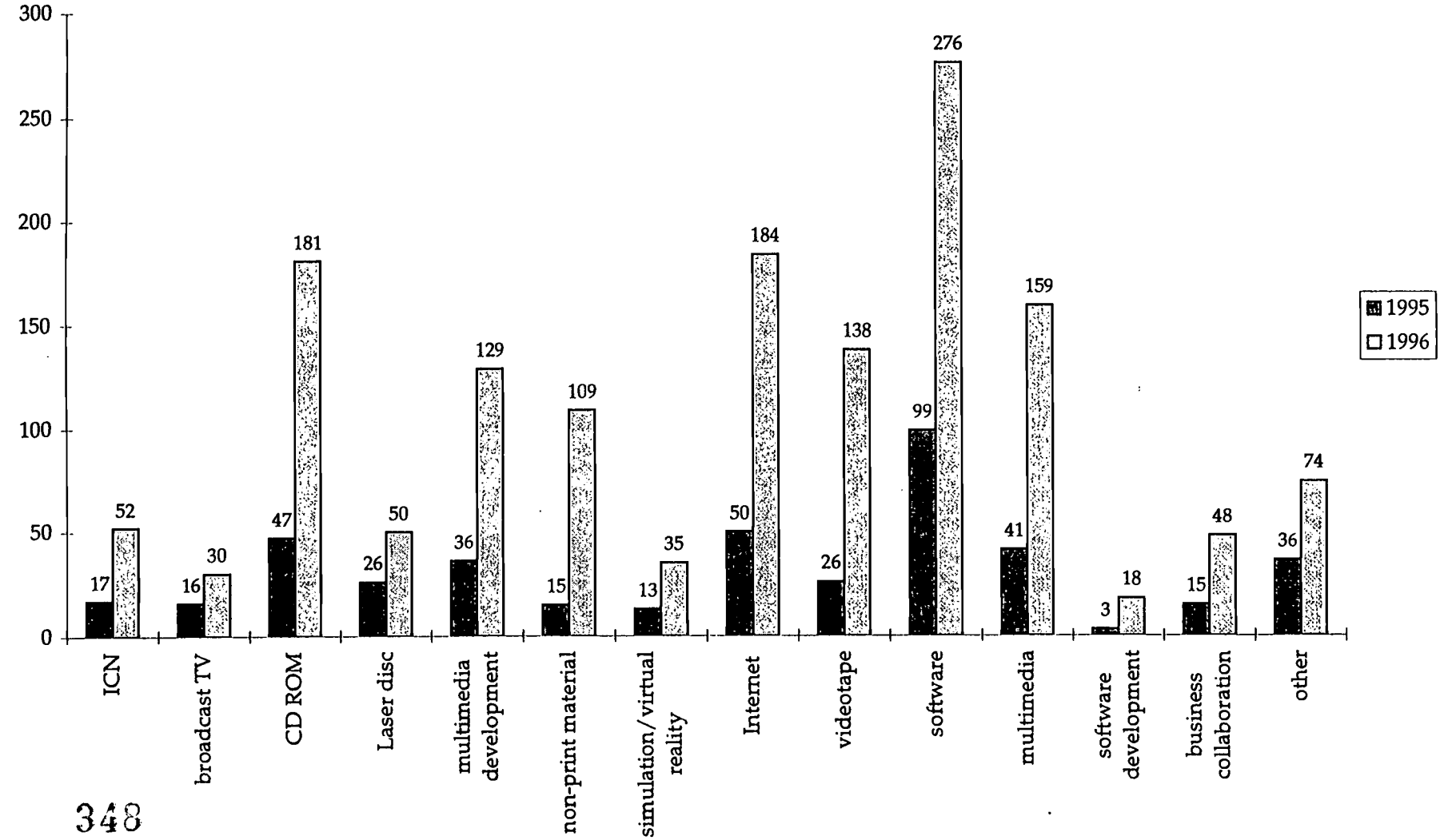
Summary of Computer Training Workshops Conducted Oct. 1996 through Aug. 1997

		Participants						
Training Category	Number of Workshops	Elementary Education	Secondary Education	Higher Education	Administration	Other	No Response	Total
Internet	26	102	65	0	8	144	183	**502**
Powerpoint	18	28	60	0	15	87	59	**249**
Wordprocessing	6	12	4	0	2	25	44	**87**
Misc. Software	6	11	0	66	10	32	23	**142**
TOTAL	**56**	**153**	**129**	**66**	**35**	**288**	**309**	**980**

Summary of Project Sponsored K-12 Distance Learning Demonstration Sessions 96-97

Event	# ICN Sites	# Student Participants	Grade Level
Worlds of music	6	175	1st-6th
Animal Welfare	6	175	1st-6th
Mozart's Friends	4	100	1st-6th
Pioneer String Quartet	11	279	1st-6th
Animal Rescue League	5	124	2nd
Dino-mite	10	273	2nd-3rd
Living History Farms	4	87	2nd-6th
Creepy Crawlie	4	107	3rd-4th
Dear Mr.President	5	138	4th-5th
Theory of WOW	22	785	4th-6th
Total Elementary Level	**77**	**2243**	
Women in Science	6	170	5th-8th
Sayorville Field Trip	6	154	6th-12th
Wildlife Refuge Field Trip	50	1250	6th-12th
Rockford Quarry	2	130	6th-12th
Colors of Music through Bowing	4	60	6th-12th
Pioneer String Quartet	4	68	6th-12th
Fingerprinting	6	150	5th-8th
Extraction	6	150	9th-12th
National Weather Service 2	6	144	8th
National Weather Service 1	4	73	9th
Joslyn Art Gallery	13	285	9th-12th
Total Middle or High School Level	**107**	**2634**	
Fair Use Guidelines	35	92	Staff Dev.
History Trunk	27	27	Staff Dev.
Kids are Alright Rock and Roll	24	240	Staff Dev.
Media Literacy	16	47	Staff Dev.
Planning for Ed. Tech.	79	107	Staff Dev.
Total Staff Development	**181**	**513**	
TOTAL	**365**	**5390**	

Comparison of Media Used: 1995 to 1996 Showcase on Educational Technology Submitted Projects



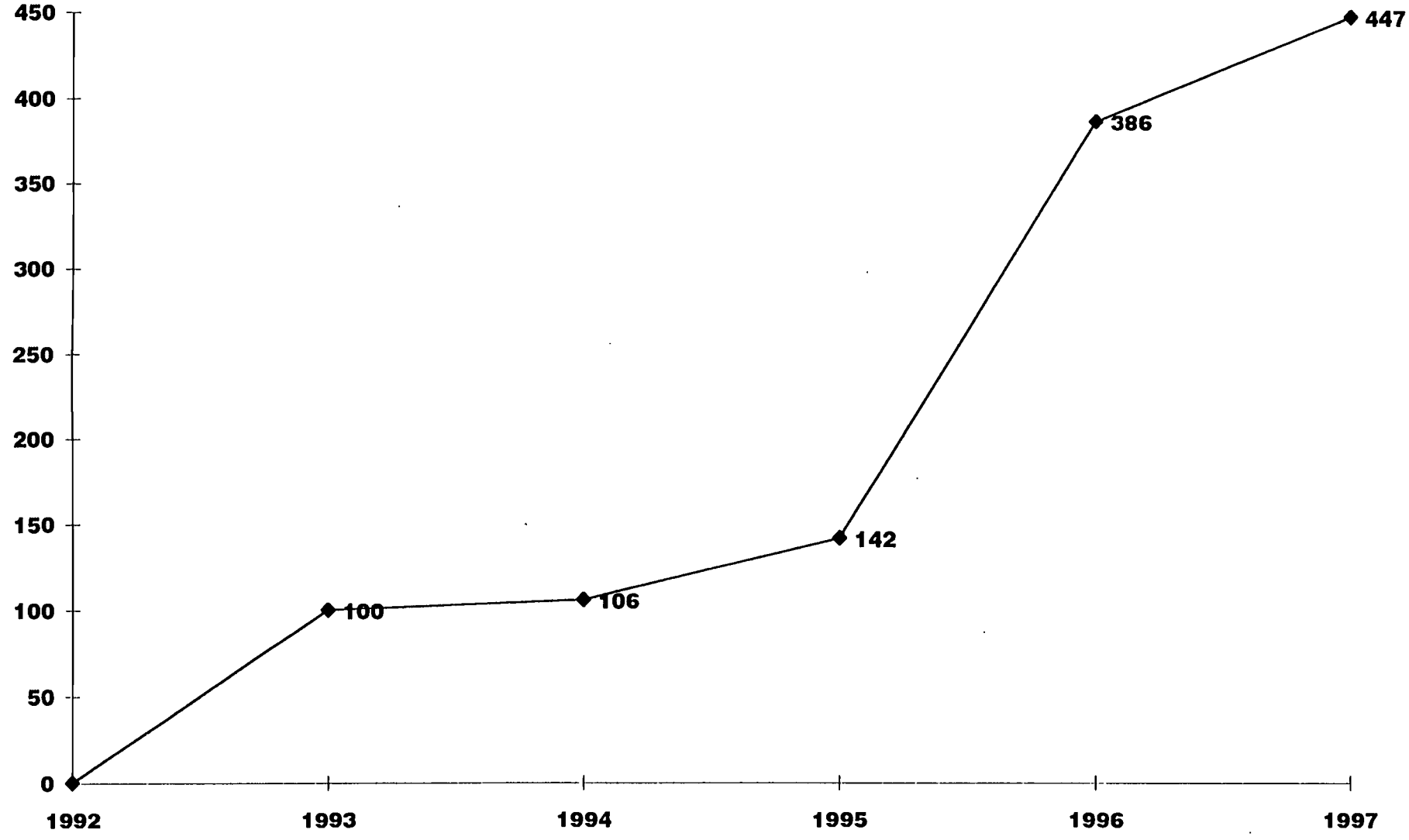
Summary of Showcase on Educational Technology Sharing Activities

Date	Activity	Delivery Method	Approximate Number of Sites	Approximate Number of Attendees	Number of Winners Presenting
12/17/96	Awards Presentation	ICN	15	NA	NA
1/9/97	Technology Fair	On-site		60	7
2/10/97	In-service Day	ICN	7	20	7
2/20/97	Sharing Session	ICN	40	100	3
2/26/97	A day at the Capitol	On-site		NA	14
3/27/97	Sharing Session	ICN	40	100	3
4/2/97	Sharing Session	ICN	40	100	3
4/10/97	Sharing Session	ICN	40	100	3
4/17/97	Sharing Session	ICN	40	100	3

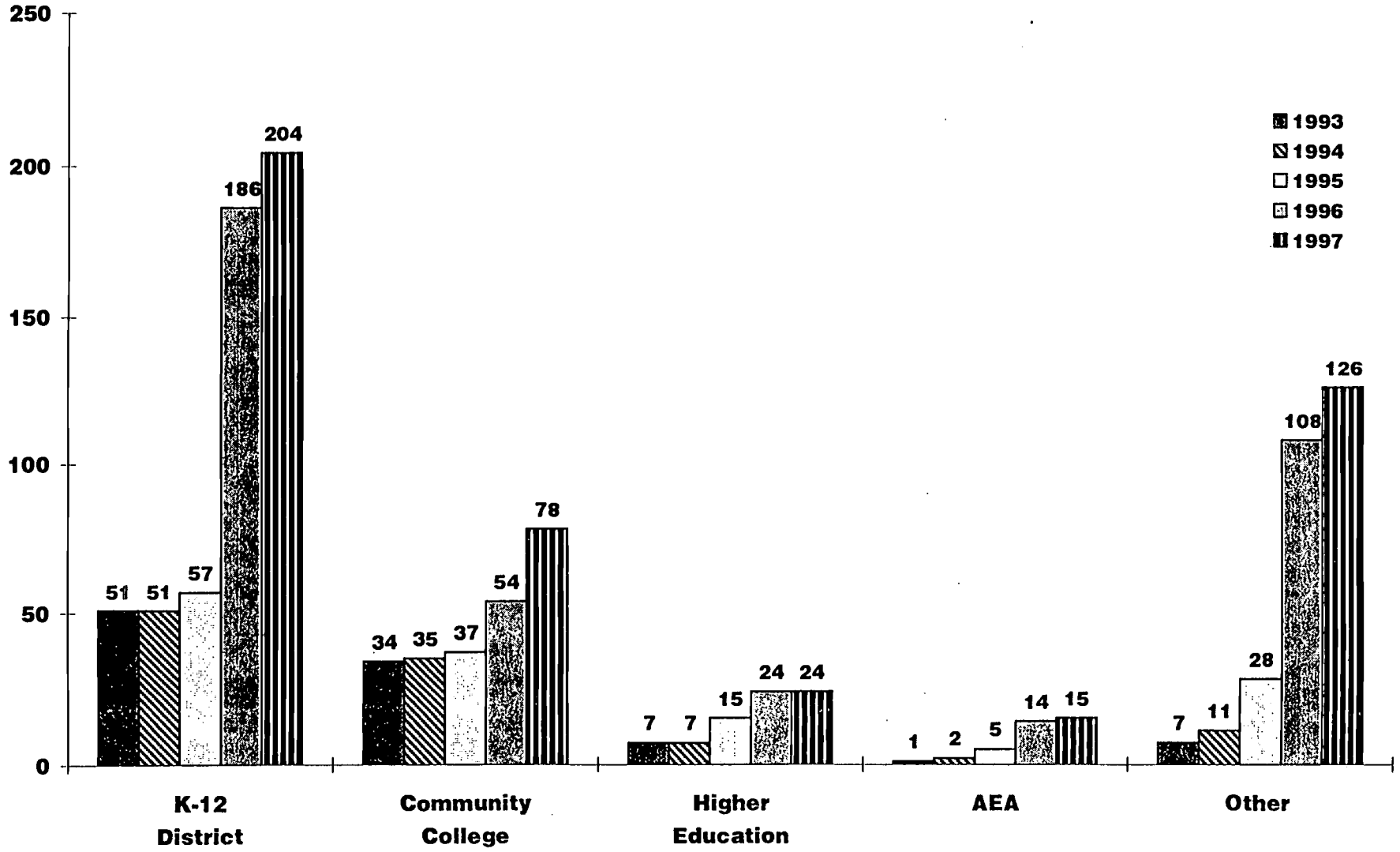
Description of Iowa School Districts with ICN or Internet Access 1996-97

		1996 ICN Access		1997 ICN Access		1996 Internet Access		1996 Internet Access	
	Total # of IA districts	**# of districts**	**% of total**	**# of districts**	**% of total**	**# of districts**	**% of total**	**# of districts**	**% of total**
Chapter One concentration sites	160	52	32.5%	73	45.6%	25	15.6%	145	90.3%
>33% of students qualify for free/reduced lunch	95	25	26.3%	33	34.7%	13	13.6%	83	87.4%
25-33% of students qualify for free/reduced lunch	107	43	40.1%	62	57.9%	17	15.9%	92	86.0%
Concentrations of minority students	67	42	62.7%	40	59.7%	21	31.3%	64	95.5%
Concentrations of limited English proficient students	26	20	76.9%	17	65.3%	5	19.2%	25	96.1%
County poverty rate >20%	45	17	37.8%	16	35.6%	10	22.2%	40	88.9%
District enrollments <600 students	163	15	9.2%	40	24.5%	16	9.8%	136	83.4%
Total	**377**	**129**	**34.2%**	**176**	**46.7%**	**71**	**18.8%**	**344**	**91.2%**

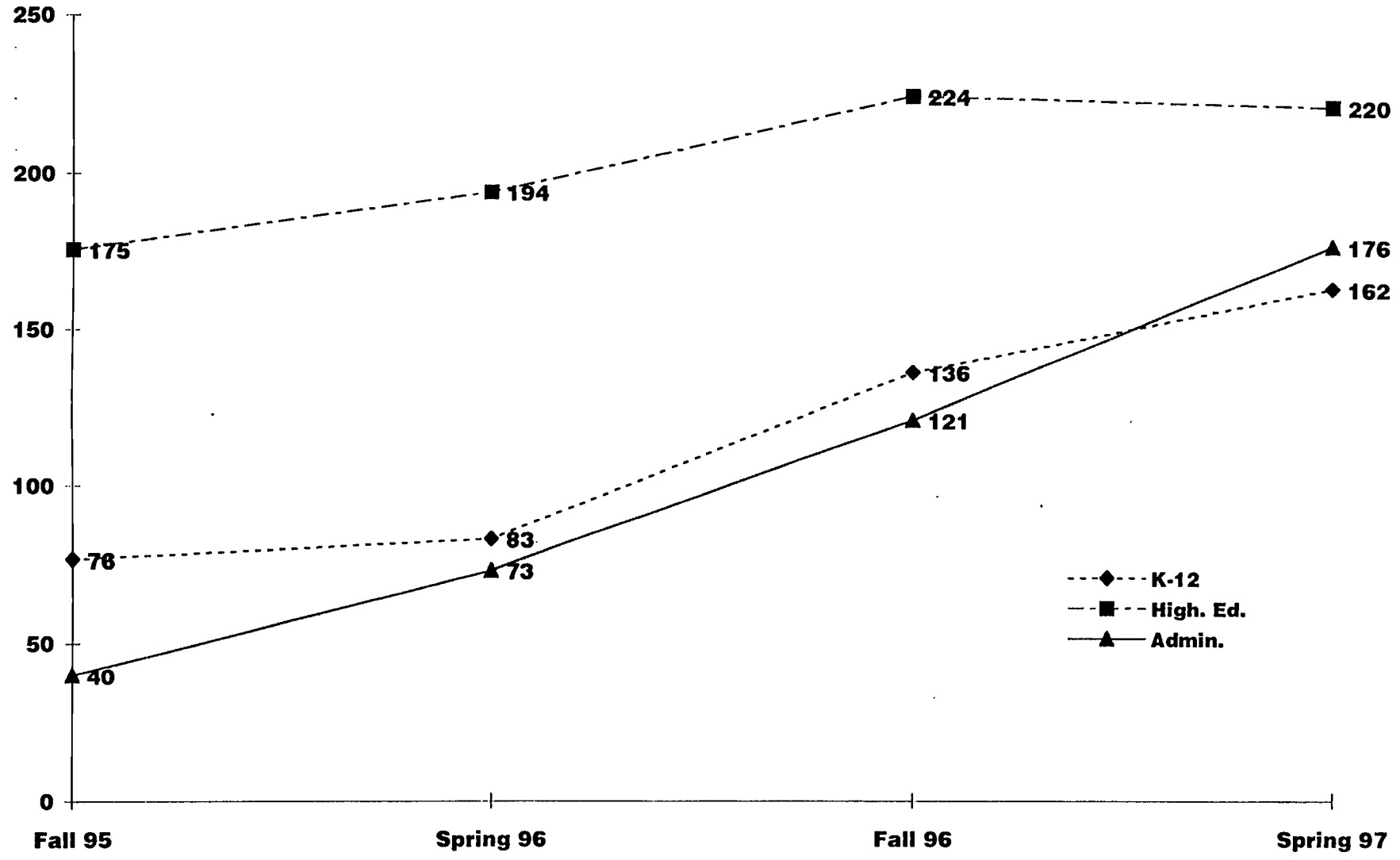
Total Number of Operational ICN Interactive Classrooms



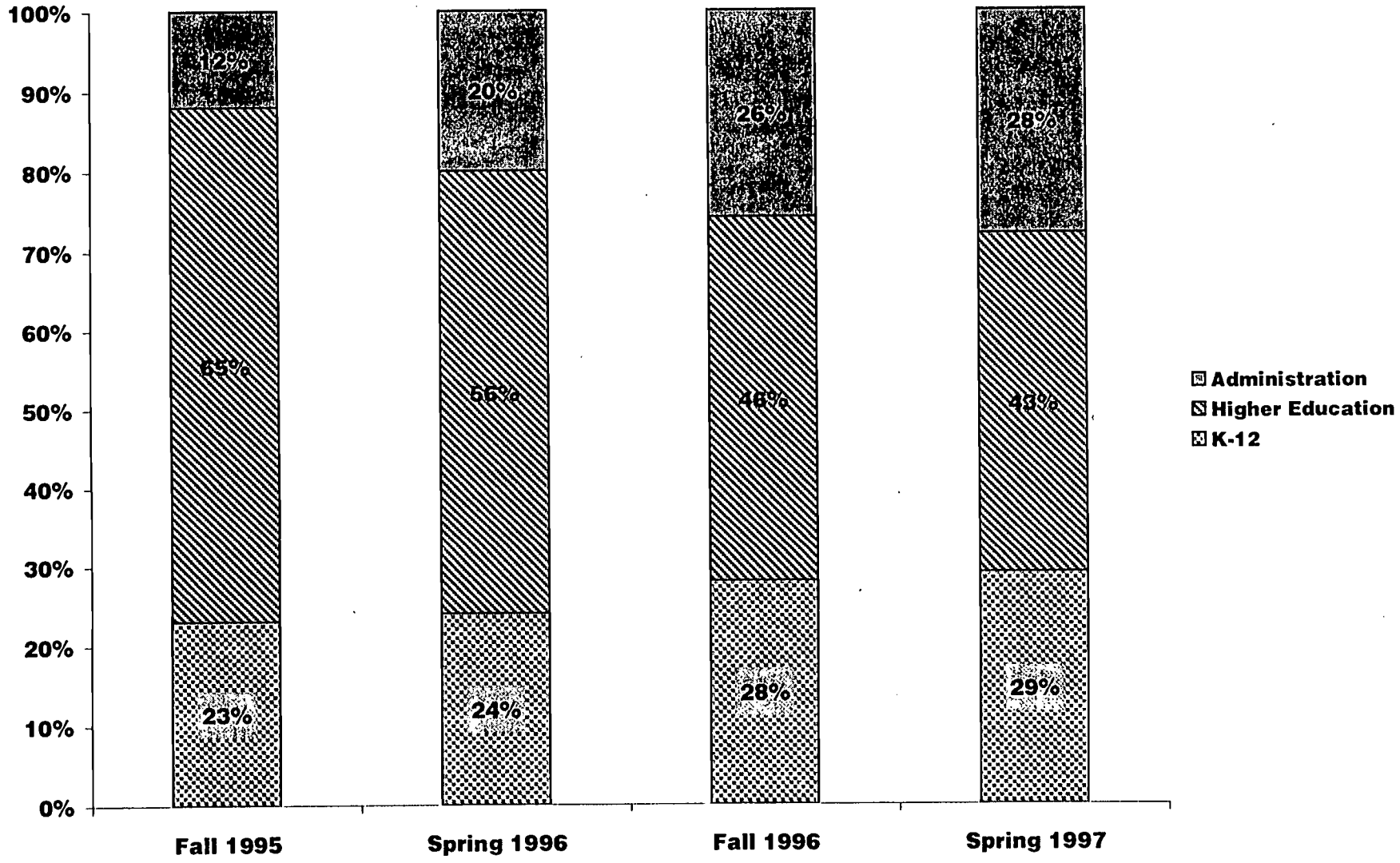
Location of Operational ICN Interactive Classrooms 1993-1997



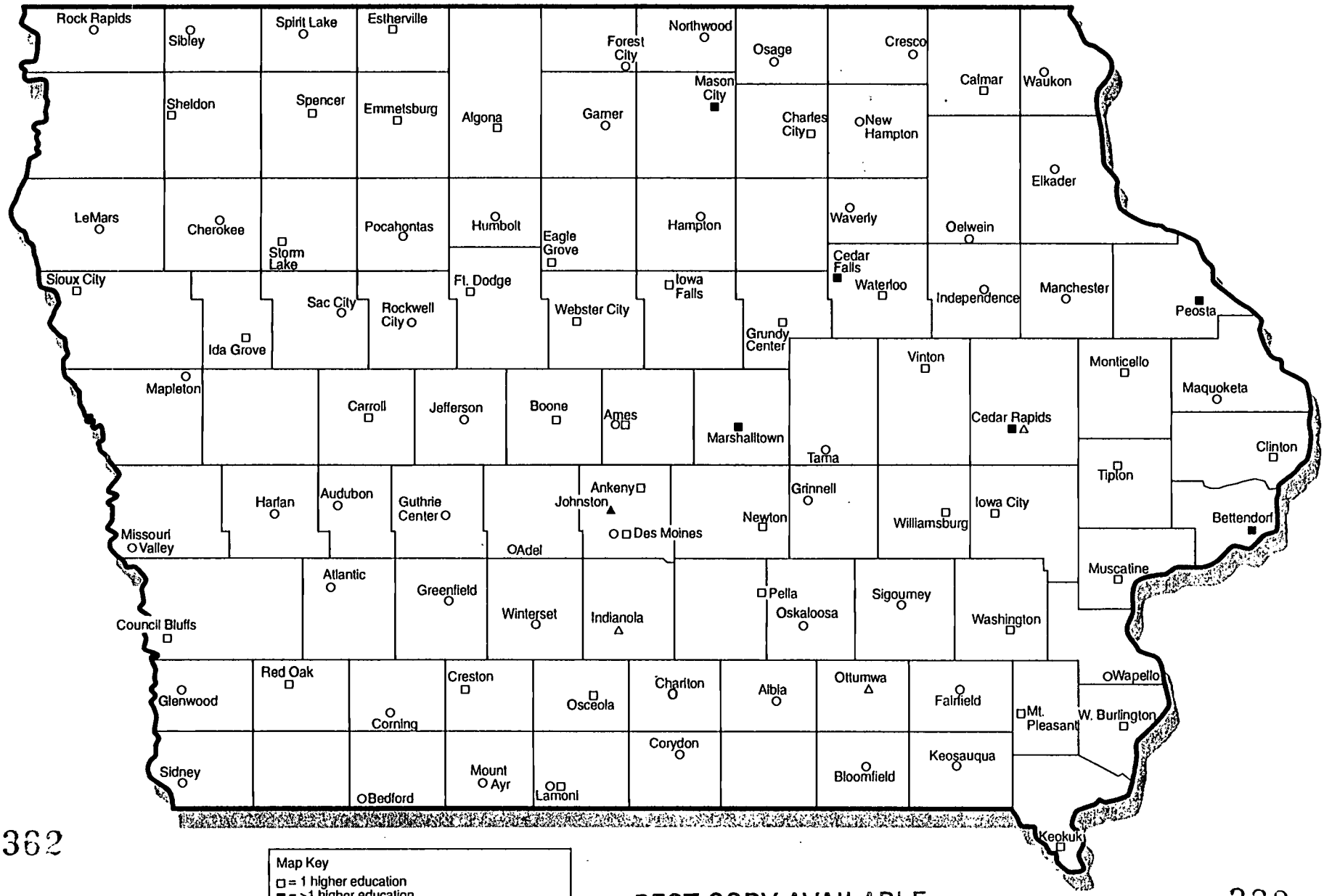
Average Number of ICN Sessions per Week by Semester



Percent of Total ICN Use by Educational Level Fall 1995-Spring 1997

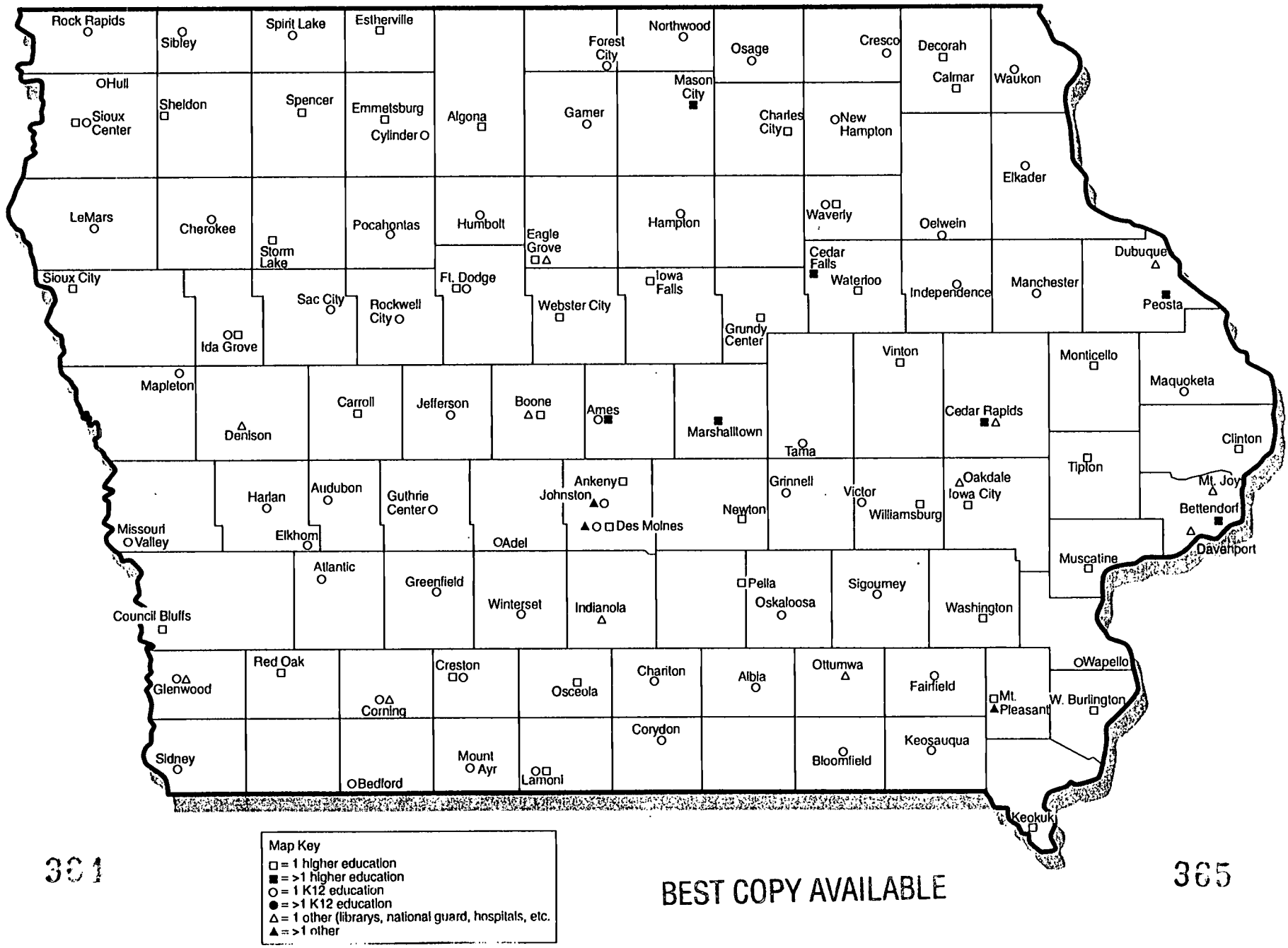


Sites on the Iowa Communications Network 1993



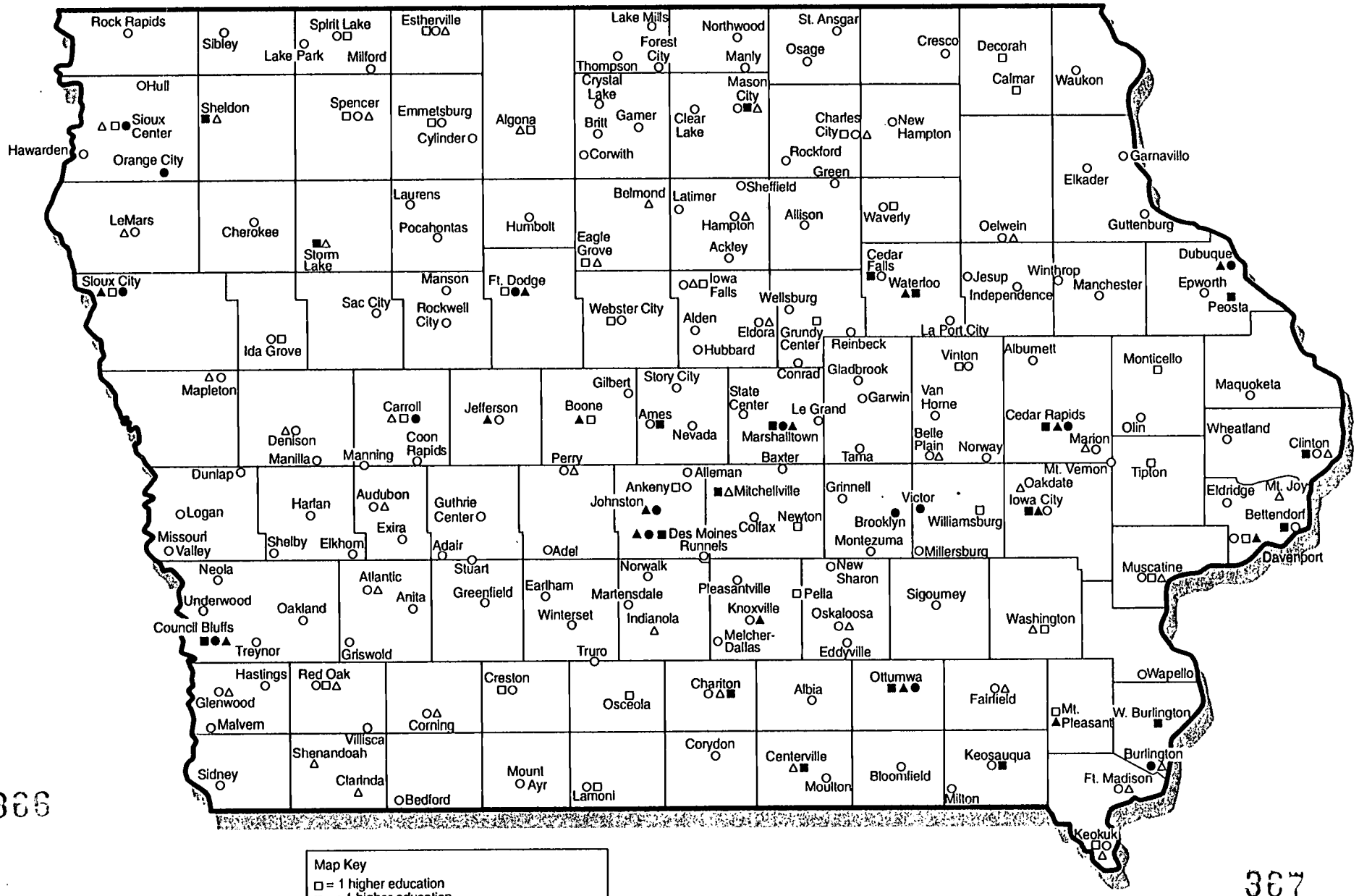
Map Key
- □ = 1 higher education
- ■ = >1 higher education
- ○ = 1 K12 education
- ● = >1 K12 education
- △ = 1 other (librarys, national guard, hospitals, etc.
- ▲ = >1 other

Sites on the Iowa Communications Network 1993-95



Map Key
- □ = 1 higher education
- ■ = >1 higher education
- ○ = 1 K12 education
- ● = >1 K12 education
- △ = 1 other (librarys, national guard, hospitals, etc.
- ▲ = >1 other

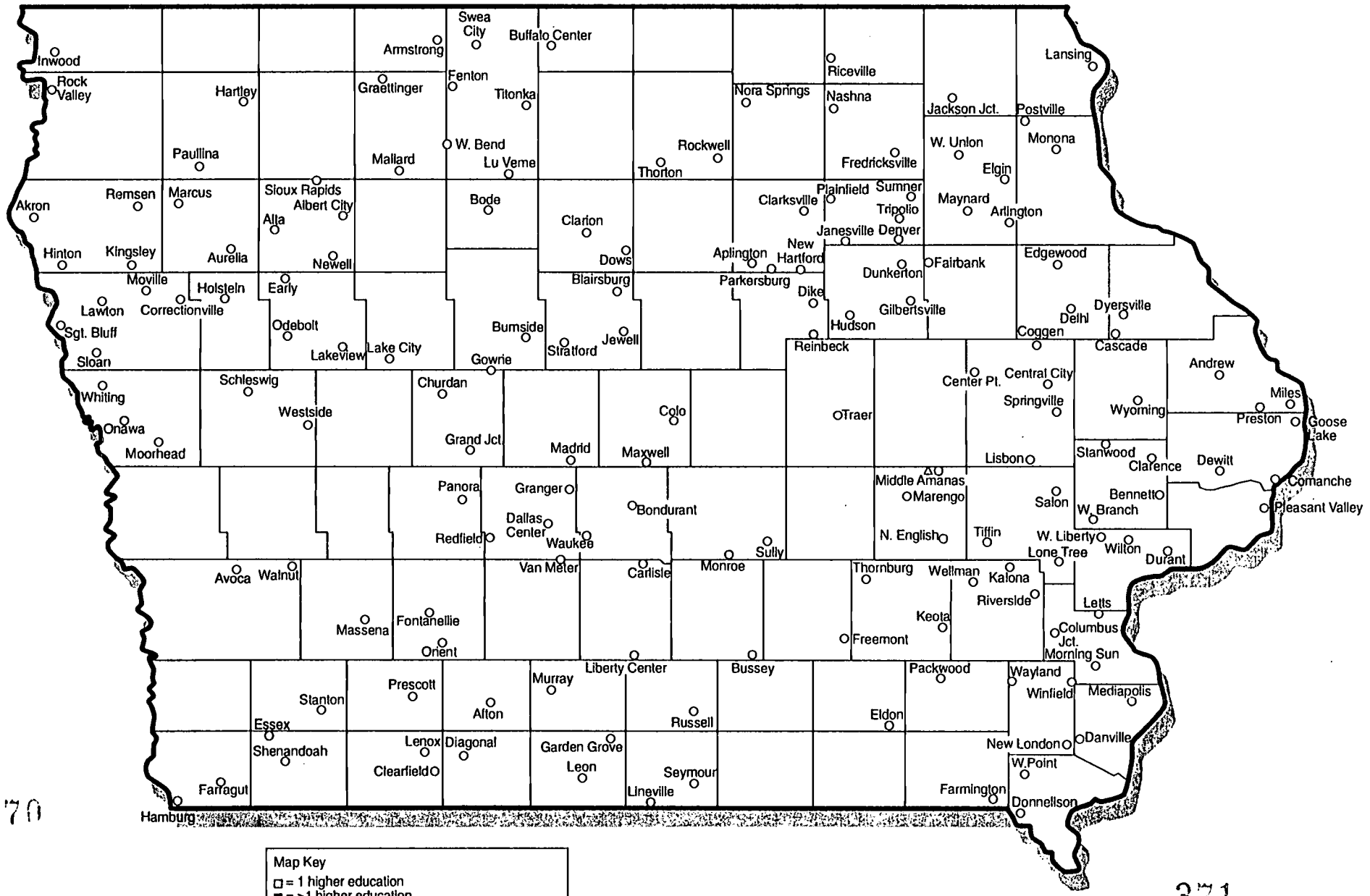
Sites on the Iowa Communications Network 1993-96



Map Key
- □ = 1 higher education
- ■ = >1 higher education
- ○ = 1 K12 education
- ● = >1 K12 education
- △ = 1 other (librarys, national guard, hospitals, etc.
- ▲ = >1 other

Sites on the Iowa Communications Network 1993-97

Sites on the Iowa Communications Network
Future Ed.



Map Key
- □ = 1 higher education
- ■ = >1 higher education
- ○ = 1 K12 education
- ● = >1 K12 education
- △ = 1 other (librarys, national guard, hospitals, etc.
- ▲ = >1 other

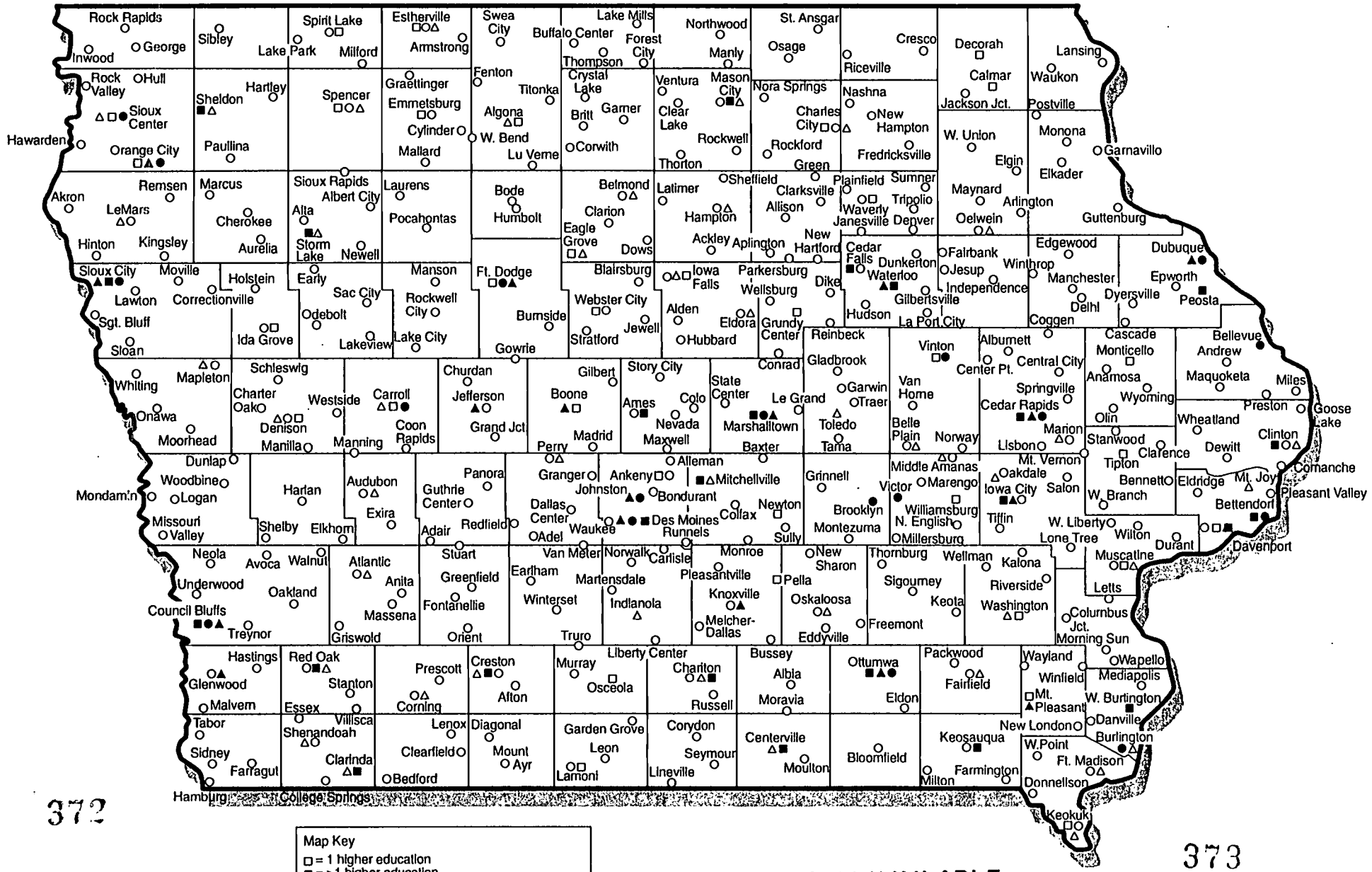
271

370

371

BEST COPY AVAILABLE

Sites on the Iowa Communications Network



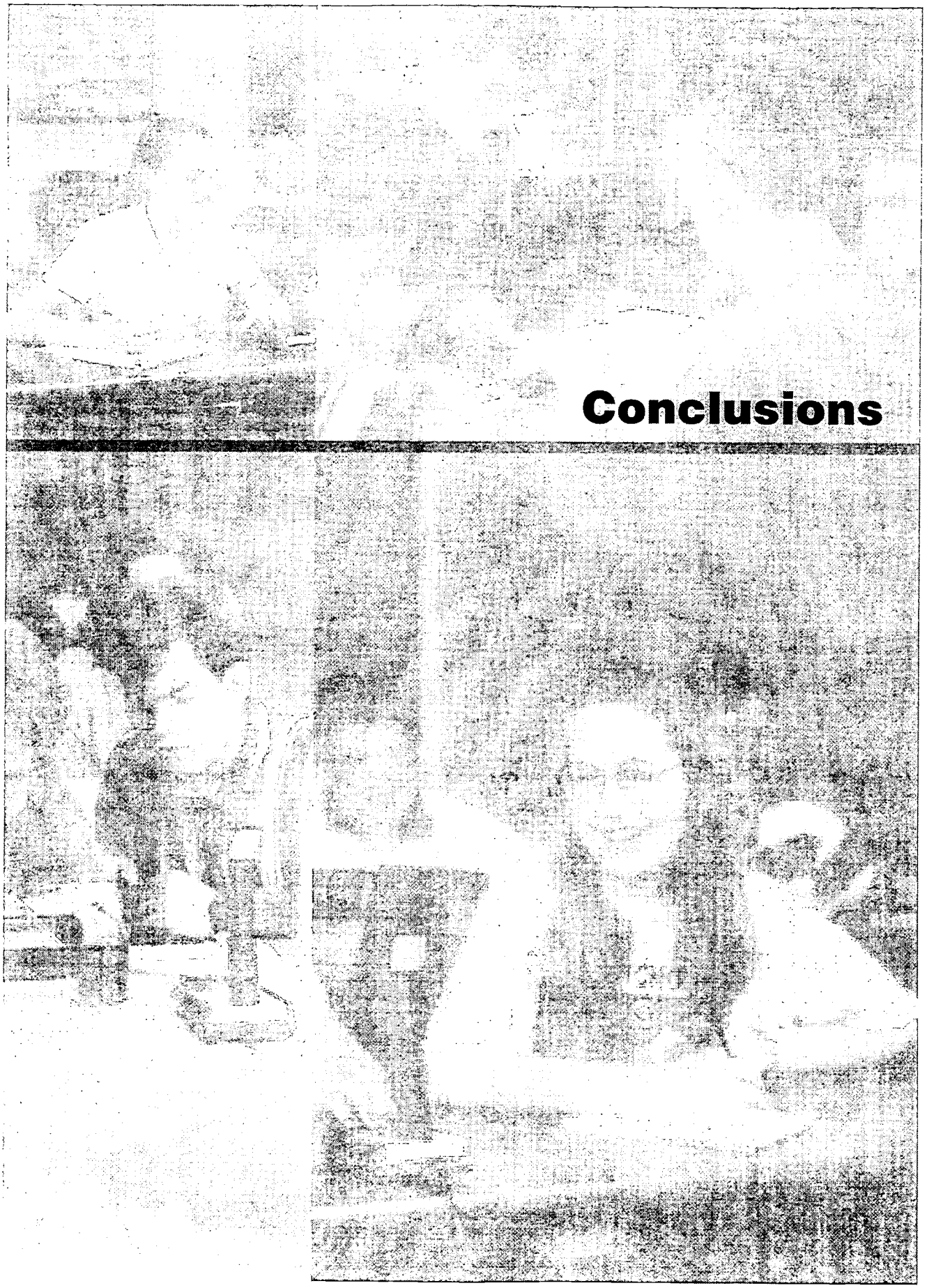
Map Key
- □ = 1 higher education
- ■ = >1 higher education
- ○ = 1 K12 education
- ● = >1 K12 education
- △ = 1 other (librarys, national guard, hospitals, etc.
- ▲ = >1 other

272

372

373

BEST COPY AVAILABLE



Conclusions

CONCLUSIONS

Based on the data collected for the Iowa Distance Education Alliance (Iowa's Star Schools project) evaluation report for July, 1996 to September, 1997, the following conclusions can be made:

Six multimedia curriculum projects have been successfully completed providing 76 instructional units using a wide variety of technologies. Three of these projects will receive continued funding to assist in staff development and dissemination. These projects have provided not only models for the integration of technology into K-12 classrooms but also insight into the process involved in the development of curricula for purposes of integrating technology. While the impact at this stage has been mostly on the teachers involved, as the products are disseminated student impact will be assessed.

Initial steps have been made in the development of multimedia curricula emphasizing the study of the Mississippi River. After reviewing standards, curriculum specialists worked in teams to provide a curriculum base that during the next year will be translated by media design experts into a multimedia format.

Exemplary classroom uses of technology have been identified and this information has been shared via the ICN and the Iowa database. A searchable database is being tested that will permit teachers to identify examples by grade, subject area, or media used. As teachers share these uses of technology, integration of technology into the classroom will continue to grow.

With the continued addition of ICN classrooms in K-12 districts, new educational opportunities are being provided for underserved learners including low income, limited English proficient, Chapter One, minority, and those attending rural schools. Horizons for traditionally underserved populations are also being broaden by increased access to the Internet.

Schools are offering more courses and one-time events delivered over the ICN providing expanded opportunities in a variety of subject areas for K-12 learners, teachers, and administrators.

The number of distance learning demonstration activities continues to increase but continues to fall short of demand. Information has been provided to schools and is also available on the Iowa database to encourage teachers to begin scheduling their own activities.

Nine action research projects funded in 1995-96 have been completed and another nine have been funded. These studies make a positive contribution to the growing body of literature related to distance education and technology.

Demand for the monograph and encyclopedia continues to be strong, indicating exposure to distance education in pre-service teacher classrooms.

Staff development continues to be a major component of the Iowa Star Schools project. Training is being offered at local, regional, and state levels and includes ICN classroom training, Internet training, and computer training.

The Iowa database is a major source of information on distance education to educators around the state. The number of links has increased and new information is being added on a regular basis.

Dissemination efforts are becoming a larger part of the project. Three new videos were released increasing the information available for in-service and pre-service teachers. Print materials continue to be distributed. Teachers are sharing how they are integrating technology into the classroom. Plans are underway for the distribution of multimedia curriula.

Some of the difficulties identified with scheduling in the previous report have been addressed through the implementation of new scheduling software. Site information and scheduling is readily available on the Iowa database.

AEAs have reported increased collaboration among educational entities at all levels that will continue after the conclusion of the project.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: IOWA DISTANCE EDUCATION ALLIANCE EVALUATION REPORT JULY 1996	
Author(s):	
Corporate Source: TECHNOLOGY RESEARCH & EVALUATION GROUP	Publication Date: JULY, 1996

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☒

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, please

Signature:	Printed Name/Position/Title: MICHAEL SIMONSON PROFESSOR
Organization/Address: TREC EDOC LAGOMARCINO IOWA STATE UNIVERSITY AMES, IA 50014	Telephone: (515) 294-6910 FAX: (515) 294-9284
	E-Mail Address: mns@iastate.edu Date: 3/3/98

(over)