

To: Lana 456 7431  
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Dept. of Education

## What Is the Star Schools Program?

Launched ten years ago, the Star Schools program was intended to provide valuable curriculum content and professional development for students and teachers who would not otherwise have access to such opportunities. Today, the Star Schools program provides quality, cost-effective instruction through distance education technologies to more than 2,000,000 learners annually in every state and the U.S. territories. Although the original program's intent was to meet the needs of small, rural schools, the program has provided opportunities for students in large urban and metropolitan communities to also benefit from the courses, curriculum modules, and electronic field trips which previously were not available. Specifically, the purpose of the program is to encourage improved instruction in mathematics, science, foreign languages, and other subjects, such as literacy skills and vocational education, and to serve traditionally underserved populations, including disadvantaged, illiterate, and limited-English proficient persons, and individuals with disabilities through the use of distance learning technologies.

Over the past several years, as new and emerging technologies have developed, the Star Schools program has similarly evolved and provided opportunities for students and teachers to explore with a variety of media. As a result of the Star Schools program, schools were equipped with satellite dishes that afforded many remote communities with access to courses which otherwise were not available. The influx of multimedia computers with CD-ROM and the resurgence of videodiscs prompted a new generation of curriculum materials, which were also supported by the Star Schools program. New fiber optic and cable systems were also supported through the program as educators found alternatives and complements to the satellite networks that continued to grow. Current advanced telecommunications and the growing convergence of satellite and Internet technologies are such that today's Star Schools projects are likely to use any or all of these capabilities, primarily choosing delivery systems in such a way as to ensure that potential recipients can access services. The Star Schools program uses multiple technologies and both synchronous and asynchronous schemes to work with their customers. Now at the dawn of a new century, the program continues to evolve in response to advances in computing and telecommunications technologies.

But more importantly, the Star Schools program is about effective teaching and learning for all students. Technology is used by Star Schools grantees to support education reform and ensure that challenging content, ambitious pedagogy and engaged learning are a part of today's classroom experience for their customers, and that teachers have the support they need to do their job well.

Examples of linking reform models with distance learning technologies are evident in several projects across the country. The Mountain Plains Distance Learning Partnership has developed a virtual campus to serve the Native American populations of Utah, Wyoming, Colorado, and Montana through a digital ATM microwave system. Teachers are trained and empowered to design and deliver interactive multi-media curricula to remote communities that have traditionally lacked access to many educational opportunities. The Juvenile Justice Distance Learning Consortium's Safety-Net project provides access to programs and materials to incarcerated juvenile offenders and their teachers in Florida, New York, and Texas to enable them to meet their "just-in-time" learning and teaching needs and interests. By combining satellite, cable, and access to Internet resources, new avenues are opened to students to motivate, challenge, and prepare them for the future as educated and productive citizens, and to encourage them to take responsibility for their own education. The Satellite Educational Resources Consortium (SERC), a consortium of 14 public broadcasting stations and state departments of education, provides curriculum-based multiple media materials on demand by digitizing extensive video archives within the public broadcasting inventory and through the development of new curricula. These examples represent efforts designed to reach traditionally underserved populations and to transform the traditional instructional model of the past into an active-learner, collaborative-based model for the 21<sup>st</sup> century.

As new technologies continue to emerge and emphasis is placed on ensuring that the needs of an increasingly diverse population are met, educators are faced with the challenges offered by new research that suggests the need for new strategies for improving student learning. For example, research suggests that increasing our expectations for students' comprehension of mathematics in the middle grades is essential to boosting student achievement and getting more students on the road to challenging college preparatory mathematics and science courses. The recent Third International Mathematics and Science Study (TIMSS) and other related research indicate that America's schoolchildren successfully acquire basic science and mathematics skills at the 4<sup>th</sup> grade but fall behind their international peers between the grades of four and eight. By the 12<sup>th</sup> grade, U.S. students' relative standing declines even further in both mathematics and science, even among our most advanced students.

To successfully teach more rigorous curricula in all content areas, middle school teachers must enter the classroom with extensive content knowledge and on-going professional development opportunities that link them to their peers and to others with experience in the content that they are teaching. However, teachers rarely have the opportunity to participate in on-going learning communities and in-depth study of the subject field through professional development (only 33.7 percent of teachers report participating in in-depth study of their subject field within the past year, 1994 Schools and Staffing Survey). Moreover, particularly in the fields of mathematics and science, nationally 28 percent of high school mathematics teachers and 55 percent of high school physics teachers neither majored nor minored in their discipline, and the statistics are even more severe in high poverty schools.

High quality, large- scale distance learning programs have the potential to make a substantial impact on these critical areas of concern. The Star Schools program is seeking bold, new ideas that can be sustained after federal funding ends and used widely throughout the United States. Critical to sustainability is not just the demonstration of an idea, but also the quantitative and qualitative evaluation of the degree to which the idea is implemented and its impact on student achievement as well as teacher competencies.

Building on the capacity of the Star Schools program to enhance learning opportunities across boundaries while fostering systemic reform and linking to standards-based efforts at the local and state levels, four themes emerge as critical components of applications in this year's Star Schools competition:

**Emerging technologies.** Communities of learners in the 21<sup>st</sup> century will rely on a variety of technologies to ensure that students of various ability levels and diverse backgrounds benefit from the new learning paradigms and applications that emerge as new technologies become available. The Star Schools program will continue to provide opportunities for the traditionally underserved populations to gain access and reduce the digital divide, which separates many of our learners and schools today. Successful distance learning programs must ensure that they reach underserved populations. To make certain that greater numbers of students and teachers can participate in distance learning programs, well-designed projects will consider ways to impact more students through large-scale implementation and will ensure that the technology required can be widely used.

**Challenging content.** Distance learning technologies offer not only the opportunity to deliver traditional instruction in new ways, they also make available entirely new and more challenging content and instruction. For example, new technologies allow students to develop and share mathematical models and simulations or share examples of students' written work over distance.

**Quality teacher training.** Increasingly, research suggests that effective professional development focus on subject matter knowledge and how students learn. For example, in the area of mathematics and science, a Star Schools project might provide training for teachers of middle school students to ensure that the teachers have the requisite expertise in the content to prepare their students for more advanced mathematics and science courses at the high school level. Thus middle school teachers would be provided courses through distance education to deepen their understanding of fundamental concepts and strategies their students must master.

**Rigorous evaluation.** It is critical that projects understand and learn from these efforts and share with other projects about their experiences with new technologies, challenging applications, and teacher training efforts. A strong evaluation which employs both qualitative and quantitative analyses including outcome measures to assess the impact on teaching and student learning from the beginning of the project throughout its operation will guide the project and provide a broad perspective on lessons learned from these new technologies.

## Who Can Apply for a Star Schools Grant?

The Star Schools program provides the opportunity for a host of entities to form a telecommunications partnership, which may be eligible to apply for funding. However, at least one local educational agency must participate in the proposed project, and eligible telecommunications partnerships must be organized on a statewide or multistate basis. There are two types of eligible entities that can apply for Star Schools funds. Eligible entities include:

- (a) A public agency or corporation that represents the interests of elementary and secondary schools that are eligible to participate in the program under part A of title I of the Elementary and Secondary Education Act of 1965, as amended by P. L. 103 - 352 (ESEA); or
- (b) A partnership that will provide telecommunications services and includes three or more of the following entities. At least one of which shall be an agency described in (1) or (2):
  - (1) A local educational agency that serves a significant number of elementary and secondary schools that are eligible for assistance under part A of title I of the ESEA or elementary and secondary schools operated or funded for Indian children by the Department of the Interior eligible under section 1121(c) of the ESEA;
  - (2) A State educational agency;
  - (3) Adult and family education programs;
  - (4) An institution of higher education or a State higher education agency;
  - (5) A teacher training center or academy which provides teacher preservice and inservice training, and receives Federal financial assistance or has been approved by a State agency;
  - (6) A public or private entity with experience and expertise in the planning and operation of a telecommunications network, including entities involved in telecommunications through satellite, cable, telephone, or computer; or a public broadcasting entity with experience of this type; or
  - (7) A public or private elementary or secondary school.

## What Are the Required Activities?

### Statutory Requirements:

To receive a grant under this program, applicants may propose support for the following:

- (1) the development, construction, acquisition, maintenance and operation of telecommunications facilities and equipment;
- (2) the development and acquisition of live, interactive instructional programming;
- (3) the development and acquisition of preservice and inservice teacher training programs based on established research regarding teacher-to-teacher mentoring, effective skill transfer, and ongoing, in-class instruction;
- (4) the establishment of teleconferencing facilities and resources for making interactive training available to teachers;
- (5) technical assistance;
- (6) and the coordination of the design and connectivity of telecommunications networks to reach the greatest number of schools.

### Applicants Must:

- (1) describe how the proposed project will assist in achieving the National Education Goals, how the project will assist all students to have an opportunity to learn to challenging State standards, how the project will assist State and local educational reform efforts, and how the project will contribute to creating a high quality system of lifelong learning;
- (2) describe the telecommunications facilities and equipment and technical assistance for which assistance is sought which may include—
  - (A) the design, development, construction, acquisition, maintenance and operation of State or multistate educational telecommunications networks and technology resource centers;

- (B) microwave, fiber optics, cable, and satellite transmission equipment or any combination thereof;
  - (C) reception facilities;
  - (D) satellite time;
  - (E) production facilities;
  - (F) other telecommunications equipment capable of serving a wide geographic area;
  - (G) the provision of training services to instructors who will be using the facilities and equipment for which assistance is sought, including training in using such facilities and equipment and training in integrating the program into the classroom curriculum; and
  - (H) the development of educational and related programming for use on a telecommunications network;
- (3) in the case of an application for assistance for instructional programming, describe the types of programming which will be developed to enhance instruction and training and provide assurance that such programming will be designed in consultation with professionals (including classroom teachers) who are experts in the applicable subject matter and grade level;
  - (4) describe how the eligible entity has engaged in sufficient survey and analysis of the area to be served to ensure that the services offered by the eligible entity will increase the availability of courses of instruction in English, mathematics, science, foreign languages, arts, history, geography, or other disciplines;
  - (5) describe the professional development policies for teachers and other school personnel to be implemented to ensure the effective use of the telecommunications facilities and equipment for which assistance is sought;
  - (6) describe the manner in which historically underserved students (such as students from low-income families, limited English proficient students, students with disabilities, or students who have low literacy skills) and their families, will participate in the benefits of the telecommunications facilities, equipment, technical assistance, and programming;
  - (7) describe how existing telecommunications equipment, facilities, and services, where available, will be used;
  - (8) provide assurances that the financial interest of the United States in the telecommunications facilities and equipment will be protected for the useful life of such facilities and equipment;

- (9) provide assurances that a significant portion of any facilities and equipment, technical assistance, and programming for which assistance is sought for elementary and secondary schools will be made available to schools or local educational agencies that have a high number or percentage of children eligible to be counted under part A of title I of the ESEA;
- (10) provide assurance that the applicant will use the funds provided under this program to supplement and not supplant funds otherwise available for the purposes of the program;
- (11) if any member of the consortia receives assistance under the Regional Technical Support and Professional Development authority (i.e. the Regional Technology in Education Consortia or R\*TEC), describe how funds received under the Star Schools program will be coordinated with R\*TEC funds received for educational technology in the classroom;
- (12) describe the activities or services for which assistance is sought, such as:
  - (A) providing facilities, equipment, training services, and technical assistance;
  - (B) making programs accessible to students with disabilities through mechanisms such as closed captioning and descriptive video services;
  - (C) linking networks around issues of national importance (such as elections) or to provide information about employment opportunities, job training, or student and other social service programs;
  - (D) sharing curriculum resources between networks and development of program guides which demonstrate cooperative, cross-network listing of programs for specific curriculum areas;
  - (E) providing teacher and student support services including classroom and training support materials which permit student and teacher involvement in the live interactive distance learning telecasts;
  - (F) incorporating community resources such as libraries and museums into instructional programs;
  - (G) providing professional development for teachers, including, as appropriate, training to early childhood development and Head Start teachers and staff and vocational education teachers and staff, and adult and family educators;
  - (H) providing programs for adults to maximize the use of telecommunications facilities and equipment;

- (I) providing teacher training on proposed or established voluntary national content standards in mathematics and science and other disciplines as such standards are developed; and
- (J) providing parent education programs during and after the regular school day which reinforce a student's course of study and actively involve parents in the learning process;
- (13) describe how the proposed project as a whole will be financed and how arrangements for future financing will be developed before the project expires;
- (14) provide an assurance that a significant portion of any facilities, equipment, technical assistance, and programming for which assistance is sought for elementary and secondary schools will be made available to schools in local educational agencies that have a high percentage of children counted for the purpose of part A of title I of the ESEA; and
- (15) provide an assurance that the applicant will provide such information and cooperate in any evaluation that the Secretary may conduct under this program.

### **What Are the Matching Requirements?**

The Star Schools program requires a matching commitment on the part of the applicant to help ensure the sustainability of their efforts beyond the Federal investment. Please note that the Federal share shall not exceed 75 percent for the first and second years, 60 percent for the third and fourth years, and 50 percent for the fifth year. The Secretary may waive or reduce this matching requirement upon a showing of financial hardship.

### **What Will Be the Time Period and Amount of Awards?**

Star Schools grants are five-year awards. Each applicant must propose five years of activities and provide a budget for each year. The amount of funds available for new awards is \$9.8 million. Grants will range from \$1.5 million to \$2 million. It is estimated that approximately 4-5 new grants will be awarded. Applications requesting amounts more than \$2 million per year or amounts exceeding \$10 million for five years will not be considered.



## What Regulations Apply to this Program?

The following regulations are applicable to the Star Schools Program: (a) the Education Department General Administrative Regulations (EDGAR) in 34 CFR Parts 74, 75 (except 34 CFR 75.102(a) and (b) (1), 77, 79, 80, 81, 82, 85, 86, and (b) 34 CFR 299, General Provisions, Elementary and Secondary Education Act, published on May 22, 1997, in the Federal Register (62FR28247).

## What Are the Selection Criteria for this Grant Competition?

The Education Department General Administrative Regulations (EDGAR) govern selection of new grants and include selection procedures and a menu of general selection criteria and optional factors. Criteria and factors appropriate to the competition are selected to evaluate the quality of each eligible grant application. For this new grant competition, the Secretary establishes the following Selection Criteria:

### 1. Need for Project (20 points)

- (a) The extent to which the proposed project will provide services or otherwise address the needs of students at risk of educational failure.
- (b) The extent to which specific gaps or weaknesses in services, infrastructure, or opportunities have been identified and will be addressed by the proposed project, including the nature and magnitude of those gaps or weaknesses.

### 2. Significance (35 points)

- (a) The national significance of the proposed project.
- (b) The likelihood that the proposed project will result in system change or improvement.
- (c) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

- (d) The extent to which the results of the proposed project are to be disseminated in ways that will enable others to use the information or strategies.
- (e) The potential replicability of the proposed project or strategies, including as appropriate, the potential for implementation in a variety of settings.

**3. Quality of Project Services (20 points)**

- (a) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.
- (b) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

**4. Quality of the Project Evaluation (25 points)**

- (a) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.
- (b) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.
- (c) The extent to which the evaluation will provide guidance about effective strategies suitable for replication or testing in other settings.

## What Is The Government Performance and Results Act?

The Government Performance and Results Act (GPRA) of 1993 places new management expectations and requirements on Federal departments and agencies by creating a framework for more effective planning, budgeting, program evaluation, and fiscal accountability for Federal programs. The intent of the Act is to improve public confidence by holding departments and agencies accountable for achieving program results. Departments and agencies should clearly describe the goals and objectives of their programs, identify resources and actions needed to accomplish these goals and objectives, develop a means of measuring progress made, and regularly report on their achievement. One important source of program information on successes and lessons learned is the project evaluation conducted under individual grants.

The goal of the Star Schools program is to improve the teaching and learning of all students through distance learning or distributed education technology activities. Projects are required to submit data on relevant performance indicators as part of their annual and final performance reports to the U.S. Department of Education. Projects are also required to participate in any national evaluation or customer survey that the Department may conduct on the program.

### Evaluation Plan

A strong evaluation plan should be included in each Star Schools program grant application and shape the development of the project from the beginning of the grant period. The plan should include clear benchmarks to monitor progress toward specific objectives, and outcome measures to assess impact on teaching and, ultimately, student learning. More specifically, the plan should identify the individual and/or organization that has agreed to serve as evaluator for the project and describe the offeror's qualifications. It should describe the evaluation design indicating: (1) what types of data will be collected; (2) when various types of data will be collected; (3) what designs and methods will be used; (4) what instruments will be developed and when; (5) how the data will be analyzed; (6) when reports of results and outcomes will become available; and (7) how information will be used by the project to monitor progress and to provide accountability information to stakeholders both about success at the initial site and effective strategies for replication elsewhere. Please note that applicants should include a plan that includes these elements as a part of their program narrative (See How Do I Apply section).

## How Do I Apply for a Star Schools Grant?

Carefully read the entire application package before beginning to prepare an application. The **Required Activities and Selection Criteria** above identify who is eligible to apply under this competition, what applicants must propose, and what criteria will be used to evaluate applications.

### The Application

**Each application should include:**

1. **Title Page:** Use the Title Page form (Standard Form 424) included in these guidelines.
2. **Table of Contents:** Include a one-page table of contents.
3. **Abstract.** Provide a one-page, double-spaced abstract that describes the need to be addressed by the project, summarizes the proposed activities, and identifies the intended outcomes. If your project receives funding, this abstract will be given to Congress. It is helpful to include on this page the name, address, and phone numbers of the applicant.
4. **Narrative.** Provide a narrative of no more than 35 double-spaced pages. Any narrative exceeding this page limitation will not be considered for funding. The narrative should address the selection criteria and each of the four themes discussed in this application package. About 20 percent or 7 pages should be devoted to the project evaluation plan.
5. **Budget.** Use the attached Budget Summary form (ED Form 524), or a suitable facsimile, to present a complete budget summary for each year of the project. Please provide a justification for this budget by including, for each year, a narrative for each budget line item which explains: (1) the basis for estimating the costs of professional personnel salaries, benefits, project staff travel, materials and supplies, consultants and subcontracts, indirect costs, and any projected expenditures; (2) how the major cost items relate to the proposed activities; (3) the costs of evaluation; and (4) a detailed description explaining in-kind support or funding provided by partners in the project, if any. Please include project staff travel funds for two trips during each year of the project to a Star Schools Project Directors and Evaluators meeting in Washington, DC. Each trip will be for three days for up to three persons. At these project meetings, grant recipients will have an opportunity to strengthen their efforts by collaborating and networking with other grantees funded by this program.

## Restricted Indirect Cost

The Star Schools program has a statutory requirement that prohibits the use of Federal funds to supplant non-federal funds. The Education Department General Administrative Regulations (EDGAR) (76.563-569) require that your agency use a restricted indirect cost rate when applying for Star Schools grants. For computational purposes, the unrestricted rate must first be calculated, then converted to the restricted rate by removing certain items from the indirect cost pool and placing them in the direct cost base. This results in a lesser rate to claim indirect cost reimbursement under restricted rate programs. Please contact your cognizant Federal agency to determine the proper restricted rate for this program. For your information, the cognizant Federal agency is typically the awarding party that contributes the most federal money to your agency. Please verify this designation with your finance office. Your organization will be expected to provide your cognizant Federal agency with a restricted indirect cost rate proposal for this program, using the enclosed guidance in appendix 1.

## The Appendix

Each application should be accompanied by an appendix, which includes:

1. **Project Personnel.** Please provide a brief summary of the background and experience of key project staff as they relate to the specific project activities you are proposing.
2. **List of Partners.** List all project partners and other sources of support, their contact persons, addresses, telephone numbers, fax numbers, and E-mail addresses. The roles and contributions of all partners and other sources of support should be described within the 35-page narrative, but letters of commitment should be included in this section of the appendix to clearly verify the role and contribution of each member.
3. **Evidence of Previous Success.** Include a brief summary of any evaluation studies, reports, or research that may document the effectiveness or success of the applicant or of the activities proposed in the narrative section of the application.

## NOTICE TO ALL APPLICANTS

The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America's Schools Act of 1994 (Pub. L. 103-382).

### To Whom Does this Provision Apply?

Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs.

This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access to or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct description of how you plan to address those barriers that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

### What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?

The following examples may help illustrate how an applicant may comply with Section 427:

- (1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.

- (2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.
- (3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls to encourage their enrollment.

We recognize that many applicants may already be implementing effective steps to ensure equity of access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

## **Estimated Burden Statement for GEPA Requirements**

The time required to complete this information collection is estimated to vary from 1 to 3 hours per response, with an average of 1.5 hours, including the time to review instructions, search existing data resources, gather and maintain the data needed, and complete and review the information collection. **If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, DC 20202-4651.**

### **Other Attachments**

**Other attachments are not encouraged. Reviewers will have a limited time to read each application. Supplementary materials such as videotapes, CD-ROMs, files on disks, commercial publications, press clippings, testimonial letters, etc. will not be reviewed and will be returned to the applicant.**

## How Do I Submit an Application?

**The deadline for receipt of applications is March 26, 1999. All applications must be received on or before that date.** This closing date and procedures for guaranteeing timely submission will be strictly observed.

### Number of Copies of the Application

Applicants are required to submit one (1) signed original and two (2) copies of the application. Each copy of the application must be covered with a Title Page (form included in these guidelines) or a reasonable facsimile. All applicants are encouraged to submit voluntarily an additional three (3) copies of the application for a total of one original and five copies, and an additional three (3) copies of the Title Page itself in order to expedite the review process. The absence of these additional copies will not influence the selection process. **All sections of the application and all sections of the appendix must be suitable for photocopying to be included in the review (at least one copy of the application should be unbound and suitable for photocopying).**

### MAILING ADDRESS AND ADDRESS FOR APPLICATIONS SENT BY COMMERCIAL CARRIER

Star Schools Program  
Attn: 84.203F  
U.S. Department of Education  
Application Control Center  
Regional Office Building 3, Room 3633  
7th & D Streets, SW  
Washington, DC 20202-4725  
Telephone: 202-708-8493

**Applications sent by mail must be received no later than March 26, 1999.** Applications not received by the deadline date will not be considered for funding unless the applicant can show proof that the application was (1) sent by registered or certified mail no later than (5) days before the deadline date; or (2) sent by commercial carrier not later than two (2) days before the deadline date. The following are acceptable as proof of mailing: (1) a legibly dated U.S. Postal Service postmark, (2) a legible mail receipt with the date of mailing stamped by the U.S. Postal Service, (3) a dated shipping label, invoice, or receipt from a commercial carrier, or (4) any other proof of mailing acceptable to the Secretary.



**Applications delivered by hand** before the deadline date will be accepted between the hours of 8:00 a.m. and 4:00 p.m. Eastern Time except Saturdays, Sundays, or Federal holidays at the Application Control Center, U.S. Department of Education, Regional Office Building 3, Room 3633, 7th & D Streets, SW (**D Street, SW, Entrance**), Washington, DC (Telephone: 202-708-8493). Applications delivered by hand on March 26, 1999 (on the deadline date) will not be accepted after 4:00 p.m. Eastern Time.

## **REQUIRED FORMS**

The following forms are required in all applications. They may be photocopied as necessary.

- Cover Page - ED Form 424 and instructions
- Budget Summary Form – ED Form 524 and instructions

**TEAMS: Project IMPACT**  
(Improving Achievement Through Converging Technologies)  
**Los Angeles County Office of Education**

**Star Schools Program Evaluation**

**Executive Summary Evaluation**  
**1998-1999 Program Evaluation**  
**1992-1999 Longitudinal Metadata Analyses**

**Carla Lane, Ed.D.**  
**Principal Evaluator**  
**The Education Coalition**

TEAMS is one of the largest K-12 providers of distance learning in the United States. In 1999-2000, TEAMS will regularly serve over 150,000 Kindergarten through eighth grade students in twenty-three states, the District of Columbia and several territories. The areas served range from Maine to the Marshall Islands, as TEAMS added Hawaii and most of the islands in the South Pacific in 1999.

Since 1990, TEAMS has been awarded grants in a competitive process by the United States Department of Education Star Schools Program. It is estimated that TEAMS has directly served about one million students and another group that is largely uncouncted because TEAMS programs are rebroadcast by public television stations and cable channels available to the public.

## **Evaluation Procedures 1998-1999**

During the 1998-1999 school year, a number of evaluation procedures were conducted for the TEAMS Project IMPACT Star Schools Program. The evaluator made site visits to the majority of the project sites. During the site visits, teachers were observed as they used the TEAMS programs. Teachers, some students, and administrators were interviewed at the school sites.

Survey instruments were prepared for TEAMS teachers and principals/technology coordinators and mailed to them. After completion, the surveys were mailed directly to the evaluator.

The statistical data on students and variables regarding possible improvement was analyzed for the 1998-1999 school year and then compiled with the existing longitudinal data on student improvement which has been collected since 1992. The statistical data on teachers, principals and technology coordinators was compiled for the 1998-1999 school year. Survey instruments and transcribed focus interviews appear in the appendices of the full evaluation report (see Appendix A and Appendix B).

## **Site Demographics**

For the 1998-1999 school year, forty percent of the schools were classified as urban, thirty-three percent were classified as suburban and twenty-seven percent were classified as rural.

## Teacher and Student Demographics

**Grades Served:** The majority of service to the schools was reported as being to the upper elementary fourth through sixth grade teachers with the fifth grade representing the largest group served. The project was used by first through eleventh grades.

**Class Size:** The mean class size was thirty-six students; however the median was twenty-eight and the mode was thirty-two students in a class.

**Social and Economic Sector:** Teachers were asked to report the social and economic sector (SES) of students. Sixty-two percent were classified as low SES a strong statistic showing that TEAMS continues to meet its mandate of serving low SES students. Twenty-nine percent of TEAMS students were classified as middle SES, and nine percent were considered high SES.

Total school SES figures varied based on 30,467 students in the participating schools whose principal or technology coordinator returned survey instruments. Low SES students were reported at 57 percent (17,425), 34 percent were middle SES (10,280), and nine percent were high SES (2,762) (see Table 1).

**Table 1**

### **Social and Economic Sector (SES) of TEAMS Students and Their Schools 1998-1999**

| Social and Economic Sector (SES) | Entire School Students Percentage<br>N= 30,467 | TEAMS Students Percentage<br>N= 1,387 |
|----------------------------------|------------------------------------------------|---------------------------------------|
| Low                              | 57                                             | 62                                    |
| Middle                           | 34                                             | 29                                    |
| High                             | 9                                              | 9                                     |

Student Ethnicity: Student ethnicity is reported in percentages in Table 2 for entire schools and for TEAMS students in those schools. The largest groups were white, African American and Hispanic.

**Table 2**

**Student Ethnicity of TEAMS Students and Their Schools 1998-1999**

| Student Ethnicity | Entire School Students Percentage<br>N= 30,467 | TEAMS Students Percentage<br>N= 1,387 |
|-------------------|------------------------------------------------|---------------------------------------|
| White             | 46                                             | 41                                    |
| African American  | 33                                             | 33                                    |
| Hispanic          | 15                                             | 21                                    |
| Asian             | 4                                              | 3                                     |
| American Indian   | +/- 1                                          | +/- 1                                 |
| Pacific Islanders | +/- 1                                          | +/- 1                                 |
| Other             | +/- 1                                          | +/- 1                                 |

**TEAMS Project IMPACT Modules and Programs Used**

Teachers reported their use of the TEAMS programming during the 1998-99 school year. Science and Mathematics programming were the most heavily used, but all strands were used (see Table 3).

**Table 3****Program Modules and Programs Used 1998-1999**

| <b>TEAMS: Project IMPACT<br/>Program and Module</b> | <b>Mean<br/>(Average<br/>Programs<br/>Used)</b> | <b>Count<br/>(Teachers<br/>Using the<br/>Programs)</b> | <b>Sum<br/>(Number<br/>of Units<br/>Used)</b> |
|-----------------------------------------------------|-------------------------------------------------|--------------------------------------------------------|-----------------------------------------------|
| <b>History/Social Science</b>                       |                                                 |                                                        |                                               |
| Student as Historian (5 programs)                   | 2                                               | 5                                                      | 8                                             |
| Student as Media Evaluator (5 programs)             | 2                                               | 2                                                      | 3                                             |
| California Here I Come! (5 programs)                | 1                                               | 3                                                      | 3                                             |
| Natural Events: Then and Now (4 programs)           | 2                                               | 6                                                      | 14                                            |
| <b>Science</b>                                      |                                                 |                                                        |                                               |
| Heat (9 programs)                                   | 4                                               | 31                                                     | 133                                           |
| Chemistry (9 programs)                              | 4                                               | 24                                                     | 103                                           |
| Earth Processes (9 programs)                        | 4                                               | 23                                                     | 97                                            |
| Weather (9 programs)                                | 5                                               | 26                                                     | 119                                           |
| Fast Plants (9 programs)                            | 4                                               | 15                                                     | 56                                            |
| <b>Mathematics/Algebra</b>                          |                                                 |                                                        |                                               |
| Primary Algebra (6 programs)                        | 3                                               | 10                                                     | 33                                            |
| Algebra in My World (6 programs)                    | 3                                               | 13                                                     | 45                                            |
| Turn on to Algebra (8 programs)                     | 3                                               | 5                                                      | 15                                            |
| Middle School Algebra (6 programs)                  | 2                                               | 8                                                      | 18                                            |
| <b>Mathematics/Geometry</b>                         |                                                 |                                                        |                                               |
| Primary Geometry (6 programs)                       | 3                                               | 10                                                     | 28                                            |
| Geometry in My World (8 programs)                   | 3                                               | 16                                                     | 54                                            |
| Turn on to Geometry (8 programs)                    | 4                                               | 9                                                      | 38                                            |
| Middle School Geometry (6 programs)                 | 3                                               | 6                                                      | 17                                            |
| <b>Primary Reading Series Grades K-1</b>            |                                                 |                                                        |                                               |
| Staff Development (4 programs)                      | 2                                               | 9                                                      | 16                                            |
| Student Programs (8 programs)                       | 2                                               | 7                                                      | 12                                            |
| <b>Primary Reading Series Grades 2-3</b>            |                                                 |                                                        |                                               |
| Staff Development (4 programs)                      | 2                                               | 6                                                      | 9                                             |
| Student Programs (8 programs)                       | 2                                               | 4                                                      | 7                                             |
| <b>Language Arts</b>                                |                                                 |                                                        |                                               |
| Letters from Rifka (5 programs)                     | 2                                               | 7                                                      | 16                                            |
| Shiloh (4 programs)                                 | 2                                               | 4                                                      | 7                                             |

## **Viewing the Programs**

Eighty of the TEAMS teachers (n=99) reported how the students viewed the programs. Fifty-two classes viewed video tapes, seven classes viewed the programs live, and twenty-one used both means depending on the availability.

## **Project Impact on Students**

During the second year of the TEAMS: Project IMPACT grant, teachers (n=99) returned report cards on 1,387 students.

The same set of questions has been asked about student improvement since 1992 and the data has been aggregated. A metadata evaluation has been conducted on the responses about the students. The 1998-1999 evaluation brought the number of students in the longitudinal portion of the evaluation study to n = 17,723.

Few evaluation studies of student impact have been maintained and continued as long as this study. It provides a very strong evaluation of the TEAMS Project and the continuing strength of the impact on students.

For the school year of 1998-1999, teachers were asked to report demographic information about the TEAMS students which included gender and assignment to a program such as Chapter 1/Title 1, limited English proficient (LEP), gifted or special education.

Teachers reported that of the 1,387 students, there were 724 male students and 663 female students. Five hundred and fifty-one students are listed as

Chapter 1/Title 1, 166 are LEP students, 180 students are enrolled in Special Education programs, and 177 students are enrolled in Gifted programs.

For the seven year period of the TEAMS longitudinal student study, of the 17,723 students, 8,973 were male (50.6 percent) and 8,750 were female (49.4 percent). There were 6,201 students reported as Chapter 1/Title 1, LEP students totaled 2,512, special education students totaled 1,612, and 1,859 students were reported as part of the gifted program at their school (see Table 4).

**Table 4**

**Comparative Demographics for 1998-1999 School Year and 1992-1999 Metadata Analyses**

|                   | <b>Total Students</b> | <b>Male</b> | <b>Female</b> | <b>Chapter/ Title 1 Students</b> | <b>LEP Students</b> | <b>Gifted Students</b> | <b>Special Ed Students</b> |
|-------------------|-----------------------|-------------|---------------|----------------------------------|---------------------|------------------------|----------------------------|
| 98-99 School Year | 1,387                 | 724         | 663           | 551                              | 166                 | 180                    | 177                        |
| 92-99 Metadata    | 17,723                | 8,973       | 8,750         | 6,201                            | 2,512               | 1,612                  | 1,859                      |

**Project Impact on Students**

The survey instrument continued to ask the same questions about the degree to which any of the following occurred for a student because of the TEAMS Project. Teachers were asked if the TEAMS Project contributed to improved content knowledge and skills for the student, improved critical thinking and problem solving for the student, improved language skills for the student, increased interest in the subject area by the student, improved quality



of work by the student, increased interest in school by the student, improved attendance at school by the student, improved behavior at school by the student, an increase in the student taking the responsibility for his/her own learning, the development of greater confidence by the student as a learner, and higher self-regard by the student. Teachers reported on each student individually.

Teachers scored any change in the student which the teacher attributed to TEAMS Project IMPACT. A scale of one to four was used where the numeral one indicated no change, the numeral two indicated very little change, the numeral three indicated some degree of change, and the numeral four indicated a great deal of change by the student.

Equating a median score in the range of 2.50 to 3.49 to a scaled response of three, the conclusion is that the teachers attribute student improvement to the TEAMS Project. Each of the variables was found to be highly significant with confidence levels of  $P < .0001$ . This was found for the 1998-1999 school year and in the 1992-1999 metadata analyses. Adding to the level of confidence for the student improvement was the database of almost 18,000 students and the extensive reporting time of seven years for the longitudinal study.

Table 5 compares the statistics of the mean, standard deviation, standard error, median and mode for the 1998-1999 school year and for the 1992-1999 metadata analyses. Note that the statistics for the current year and the

metadata years are quite close which indicates an even higher validity for the current year.

**Table 5**

**Mean Scores for Qualitative Variables for 1998-1999 School Year and 1992-1999 Metadata Analyses**

| Variable                                       | 98-9 Mean | 92-9 Mean | 98-9 Std. Dev | 92-9 Std. Dev | 98-9 Std. Error | 92-9 Std. Error | 98-9 Median | 92-9 Median | 98-9 Mode | 92-9 Mode |
|------------------------------------------------|-----------|-----------|---------------|---------------|-----------------|-----------------|-------------|-------------|-----------|-----------|
| Content Knowledge & Skills                     | 3.083     | 3.088     | .830          | .793          | .023            | .006            | 3           | 3           | 3         | 3         |
| Improved Critical Thinking and Problem Solving | 2.992     | 3.038     | .807          | .794          | .022            | .006            | 3           | 3           | 3         | 3         |
| Improved Language Skills                       | 2.681     | 2.755     | .960          | .894          | .026            | .007            | 3           | 3           | 3         | 3         |
| Increased Interest in the Subject Area         | 3.128     | 3.148     | .887          | .823          | .024            | .006            | 3           | 3           | 4         | 3         |
| Improved Quality of Work                       | 2.814     | 2.804     | .980          | .857          | .027            | .006            | 3           | 3           | 3         | 3         |
| Increased Interest in School                   | 2.775     | 2.836     | 1.023         | .905          | .029            | .007            | 3           | 3           | 3         | 3         |
| Improved Attendance                            | 2.231     | 2.322     | 1.136         | 1.075         | .032            | .008            | 2           | 2           | 1         | 1         |
| Improved Behavior                              | 2.457     | 2.418     | 1.095         | 1.025         | .030            | .008            | 2           | 2           | 2         | 3         |
| Takes Responsibility for Own Learning          | 2.752     | 2.737     | 1.014         | .939          | .028            | .007            | 3           | 3           | 3         | 3         |
| Greater Confidence as a Learner                | 2.873     | 2.872     | .960          | .889          | .027            | .007            | 3           | 3           | 3         | 3         |
| Higher Self-Regard                             | 2.764     | 2.805     | 1.021         | .930          | .029            | .007            | 3           | 3           | 3         | 3         |

**Disaggregated Student Data 1998-99 School Year and 1992-1999 Metadata Analyses**

As reported, student information was collected based on certain groupings which included gender, and programs for students who were classified as Chapter 1/Title 1, limited English proficient, gifted and special education participants. Statistical analyses were done on each group according to the eleven variables where change might take place. The analyses were to

determine what changes took place in the variables according to the disaggregated student grouping.

The conclusion is that for this year and for the longitudinal student study, teachers attribute improvement in all areas for the Chapter 1/Title 1, LEP, gifted, and special education students.

**Chapter 1/Title 1 Students:** Chapter 1/Title 1 students in 1998-1999 and 1992-1999 showed improvement in all variables with a median score in the range of 2.50 to 3.49 for a scaled response of three.

**Limited English Proficient (LEP) Students:** LEP students in 1998-1999 and 1992-1999 showed improvement in all variables with a median score in the range of 2.50 to 3.49 for a scaled response of three. For attendance, the longitudinal study showed a scaled response of two.

**Gifted Students:** Gifted students in 1998-1999 and 1992-1999 showed improvement in all variables with a median score in the range of 2.50 to 3.49 for a scaled response of three. For the variable of attendance, the scaled response was a two for both groups.

**Special Education Students:** Special education students in 1998-1999 and 1992-1999 showed improvement in all variables with a median score in the range of 2.50 to 3.49 for a scaled response of three. For the variables of behavior and attendance, the scaled responses were two and 1.5 respectively for both groups.

## **Factors Limiting the Use of TEAMS**

Principals and technology coordinators (n=81) were asked what they believed limited the use of TEAMS in their schools. Time was listed as the biggest limiting factor by 53 (65 percent) of the principals and technology coordinators. Training was reported as a limitation by 24 respondents. Traditionally, access has been the biggest limiting factor. Only fourteen respondents reported access through hardware as a limitation and eighteen reported lack of access in the classroom as a limitation.

## **Access to TEAMS Through Multiple Technologies**

Principals and technology coordinators (n=81) were asked how TEAMS programs were accessed at their sites. Satellite reception was reported by twenty-five sites, cable was reported by fifty sites with forty-eight sites reporting that they received the programs through a public television station that was probably carried by the cable signal. Fifty-three reported using video tape of the programs. Five sites reported ITFS (instructional television fixed service) reception.

The largest installed base of technology was television. Eighty had televisions and VCRs in the classrooms. Fifty-three had laser discs and sixty-eight had CD-ROMs.

Internet access was reported by forty-nine respondents. The methods used to access Internet were mixed with twenty-three reporting access through T1 or

ISDN lines and forty-four reporting access through a traditional telephone modem. Forty-four also reported telephones in classrooms.

Computer technologies in the classroom were also mixed between PCs and Macintosh equipment with a wide range of aging technology. Computers ranged from the PC 486 models and Apple IIe models to the newest Pentium chip based PC and Macintosh Power PC models.

This shows a strong basis for the decision by TEAMS to continue to use multiple media to provide access to programs delivered on a national level (see Table 6).

**Table 6**

**Other Classroom Technology 1998-1999**

| Technology               | Number Yes | Number No | Number Missing |
|--------------------------|------------|-----------|----------------|
| Television               | 80         |           | 1              |
| VCR                      | 80         |           | 1              |
| 2-way Video Conferencing | 5          | 65        | 11             |
| If yes, VTEL?            | 2          |           |                |
| If yes, PictureTel?      | 0          |           |                |
| If yes, Other?           | 1          |           |                |
| Laserdisc                | 53         | 24        | 4              |
| CD ROM                   | 68         | 10        | 3              |
| Internet Access          | 49         | 19        | 13             |
| If yes, ISDN?            | 4          |           |                |
| If yes, T1?              | 19         |           |                |
| If yes, Other?           | 1          |           |                |
| Telephone                | 44         | 37        | 0              |
| Modem                    | 44         | 27        | 10             |
| If yes, 28.8?            | 3          |           |                |
| If yes, 56K?             | 7          |           |                |
| If yes, Other?           | 9          |           |                |
| Firewalls or filters     | 27         | 32        | 22             |
| Electronic mail          | 57         | 18        | 6              |

## **Conclusions**

The TEAMS Project has had a significant impact on student improvement which has been statistically validated for a period of seven years during which information was collected on about 18,000 students across the United States.

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## ● Technology in Education

**DLRN**  
 distance learning resource network

**Star Schools**

### Articles:

[Amongst the Stars: Star School Web Sites](#)
[The Natural Connection: Distance Learning Technologies & Staff Development](#)

### References:

### Page Contents:

[How do Star Schools Projects Work?](#) | [What Services are Available?](#) | [Amongst the Stars: Star School Web Sites](#) | [Does Star Schools Make a Difference?](#) | [Who Operates Star Schools Projects?](#) | [Project Grants 1999- 2000](#) | [Special Statewide Network Grant](#) | [High School & Adult Literacy Projects](#) | [Dissemination Project](#)

## What is the Star Schools Program?

### Current

[Coming Soon: Program Sampler 1999-2000](#)

### Past

[Program Sampler 1998-1999](#)
[Project Grants 1995-1998](#)

The Star Schools Program is one of the largest and most successful public and private partnerships for delivering distance education in the United States and around the world. Since 1988, the Star Schools grants have provided access to technology, telecommunications equipment and instructional programs for more than one million students, and provided professional development activities for more than 30,000 teachers and administrators in thousands of schools across the United States and abroad. The program has awarded over \$250 million to 43 projects over 5 years. These projects continue to grow in size and scope, incorporating state-of-the-art technology and more students each year.

## How Do Star Schools Projects Work?

The Star Schools projects deliver distance education courses and services using many technologies including satellite delivery systems, open broadcasts, cable, and the Internet.

## What Services are Available From Star Schools Projects?

Through the Star Schools projects, schools have access to instructional programming, including hands-on science and mathematics, algebra, calculus, physics, advanced placement courses, foreign language courses, workplace skills, and life skills programs. Instructional programs serve K-12 students and adult learners, including limited English-proficient students and disabled students and adult learners. Many projects' Web sites offer creative and interactive services for students, teachers, and parents. High school completion and adult literacy programs are also available.

Teachers and other educational personnel can participate in teleconferences, online discussion groups, and virtual communities to communicate with

colleagues around the world and participate in staff development programs. Classes are also available that are designed to improve parents' abilities to ensure their children greater success in school.

## **Does Star Schools Make a Difference?**

Based on the success of its first ten years, the Star Schools Program is one of the largest and most effective educational partnerships utilizing the growing number of emerging technologies to make a difference in classrooms across the United States. Evaluation data, documentation, and case studies show that the Star Schools projects have resulted in much greater access of education services for all types of students in a wide range of settings. Students, teachers, and evaluators report of improved instruction, exemplary instructional practices, increased interactivity between students and teachers, and enhanced student interest and motivation. The Star Schools Program does make a difference.

## **Who Operates Star Schools Projects?**

The U.S. Department of Education awards grants to telecommunications partnerships to operate Star Schools projects. Partnerships include local school districts, state departments of education, public broadcasting entities and other public and private organizations. For more information, contact:

Tawanna Coles, (202) 219-2143

E-mail: [tcoles@inet.ed.gov](mailto:tcoles@inet.ed.gov)

Fax: (202) 208-4042

URL: [www.ed.gov/prog\\_info/StarSchools/](http://www.ed.gov/prog_info/StarSchools/)

Mailing address: U.S. Department of Education

Learning Technologies Division

555 New Jersey Ave. N.W.

Washington, DC 20208-5544

**Top**

## **General Project Grants 1999- 2000**

### **Reading is Fundamental Telecommunications Partnership**



Reading is Fundamental Telecommunications partnership will promote and support children and their families to become effective readers. This project will use satellite-delivered training programs along with innovative Internet-based activities to train parents and volunteers how to develop effective, motivated readers. The project will try to demonstrate how telecommunications technologies can help to create a nation of readers through this innovative telecommunications reading initiative.

This project represents an innovative and ambitious nationwide telecommunications reading initiative, using satellites, Palm Pilots, CD-ROMs, videos and on-line, web-based activities to expand access exponentially, to training on how to prepare children to read, how to read to



children, and how to help children become effective readers. The project will use satellite-delivered training programs, along with innovative Internet-based activities, to train parents and volunteers how to develop effective, motivated readers. The target audiences for this project are children, age's birth to 11 years old.

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10905 Fort Washington Road, Suite 300  
Fort Washington, MD 20744-5843



### **Mountain Plains Distance Learning Partnership**

Mountain Plains Distance Learning Partnership focuses on the needs of the Native American population in this vast intermountain region. This partnership of four states will develop an electronic, virtual campus employing a two-way audio and visual interactive connection using fully scaleable high speed digital ATM microwave technology, electronic transmission and receiving classrooms, and computer-assisted instructional programming centers. Teachers will be empowered to design and deliver interactive multimedia curricula to remote communities for K-14 students and adults using a comprehensive training model and multimedia curriculum strategies.

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**Service Area:** Utah, Wyoming, Colorado, and Montana

**Mailing Address:**

Mountain Plains Distance Learning Partnership  
Central Wyoming College  
2660 Peck Avenue  
Riverton, WY 82501

### **Corrections Learning Network**



The Corrections Learning Network will place special focus on the specific needs for adults in correctional facilities, such as victim empathy, wellness education, and anger management. It will also develop multiple technology channels which do not currently exist. The Corrections Learning Network will also develop a series of programs that will focus on topic such as computer operating systems, networks basic software applications, peripheral hardware, telecommunications and applications in the workplace.

This consortium proposes to provide technology based, interactive instructional programming to adult correctional facilities. The Corrections Learning Network will be piloted in Florida and Washington state and then disseminated nationally. The project will provide: 1) education for incarcerated adults, 2) professional development for educators, and 3) system enhancements benefiting all audiences. A third-party evaluation providing qualitative and quantitative analyses to assess the impact on teaching and

learning will measure project effectiveness.

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1025 West Indiana Avenue

Spokane, WA 99205-4400



### **STEP°Star Network/Pacific Star Schools Partnership**

The STEP°Star Network produces interactive educational programming delivered by satellite and cable television. Broadcast offerings include K-12, alternative education, college and professional development courses and programs. Student participants receive courses and enrichment in areas that include foreign languages, science and workplace readiness. Professional development offerings are primarily geared to K-12 educators and parents. In addition to its televised coursework, the network maintains a significant on-line component which is used for testing, data exchange, messaging, research and group projects.

**Contact:** Steve Witter (509) 456-7685

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Educational Service District 101

910 North Ash

Spokane, WA 99201-1881



### **Safety-Net: Justice Distance Learning Consortium (JDLC)**

Florida, New York and Texas have joined together to form the Justice Distance Learning Consortium (JDLC). Through SAFETY-NET, a newly created broad-band multi-media network, juvenile offenders, teachers and staff within these three states will receive computer and video-based educational programs and courses delivered via satellite and DBS technologies. The primary objectives are to stimulate student learning through interactivity with innovative educational resources and to provide unique professional development opportunities for the adults who serve them.

**Contact:** Gail Arnell (310) 292-9800, ext.106

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**URL:** [www.safety-net.org](http://www.safety-net.org)

**Service Area:** Florida, New York, and Texas

**Mailing Address:**

Justice Distance Learning Consortium

Phoebus Communications

10905 Fort Washington Road, Ste. 300

Fort Washington, MD 20744

## The TECH Share Project



TECH Share will improve student learning through the use of teacher-created, professionally honed learning modules. These modules will be technology driven and standards-based, with embedded strategies for teaching English to Speakers of Other Languages, and multicultural sensitivity. The TECH Share project will produce standards-based, electronic-based curriculum modules to be utilized by teachers in the classrooms.

The TECH Share Project is designed to use the multimedia capability of the Internet to provide interactive text, audio, and video on demand to support standards-based learning activities. The focus of the project will be to improve student learning through the use of teacher-created and professionally enhanced learning modules. These modules will be technology driven and will incorporate embedded strategies for Teaching English to Speakers of Other Languages (TESOL), as well as, multicultural sensitivity. A unique feature of the proposed project is that it will have as partners three Technology Innovation Challenge Grant projects so that materials and products that are being developed can be disseminated to a wider audience. When implemented, the overall scope of the project will service some 80,000 students, most of whom are either Limited English Proficient (LEP), low income, or both, and most of whom perform well below the national averages in academic achievement.

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**Mailing Address:** TECH Share Project

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## Massachusetts Corporation for Educational Telecommunications

Massachusetts Corporation for Educational Telecommunications (MCET) Transitions uses multiple technologies to provide a collaborative lifelong learning project with hands-on learning, reading, writing, and professional development programs to develop the skills, self-esteem, and confidence of the teens, adults, parents, and non-native speakers in the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, and the District of Columbia. During the five-year project, MCET and its partners are working to develop and link learners through reading and writing developmental skill clusters that form a continuum of tools for lifelong learning. **Contact:** Kathleen Buckley or Jack Casey (617) 252-5700

**E-mail:** [star@mcet.edu](mailto:star@mcet.edu)

**URL:** [www.mcet.edu](http://www.mcet.edu)

**Service Area:** Maine, Massachusetts, Connecticut, New York, New Hampshire, and District of Columbia

**Mailing address:**

Massachusetts Corporation for Educational Telecommunications

One Kendall Square, Bldg. 1500  
Cambridge, MA 02139

## **NEARStar (Network for English Acquisition and Reading)**



NEARStar will focus on creating a distributed learning environment that will improve reading skills for limited or non-English speaking students and also provide professional development for teachers. This project will foster telecommunications infrastructure and end-user equipment to ensure the effective utilization of the project over the Internet and World Wide Web.

Project proposes to develop interactive web based software to address the needs of English as Second Language (ESL) students and their teachers. NEARStar's web based learning program will support students in developing English language and reading skills. Teachers will be able to instantly access diagnostic information about individual students or for the whole class. These diagnostic results will lead teachers directly to NEARStar's professional development component, which will be available in a variety of configurations and media. Through the program, teachers will have access to leading reading and English as Second Language experts; additional materials and resources in specific skills such as vocabulary building; and video streaming examples of research based effective instructional practices in real classrooms as part of university-level on-line course work and on-line collaborative inquiry groups.

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## **PRELStar**

PRELStar: A Pacific Islands Distance Learning Program is designed to provide Pacific communities with quality distance learning educational programming. In cooperation with educational agencies and the U.S.-affiliated Departments of Education in the Pacific region, PRELStar will develop satellite connectivity and provide appropriate and exciting courses for students, teachers, administrators, and adults. The project will also provide professional development for Pacific island teachers to produce and deliver programming that features the area's unique cultures. **Contact:** Steve Baxendale, (808) 441-1363

**E-mail:** [baxendas@prel.hawaii.edu](mailto:baxendas@prel.hawaii.edu)

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**Mailing Address:**

PRELStar

A Pacific Islands Distance Learning Program  
Ali'i Place 25th Floor  
1099 Alakea Street  
Honolulu, HI 96813



### **SERC: Distance Learning: The Next Generation**

Initiatives from SERC's The Next Generation project include creating curriculum-based multiple media materials in science and mathematics and distributing these resources on-demand. Specific projects entail building an Internet-based Calculus/AP Calculus course and creating, with the National PTA as a partner, stronger ties between school and community. Programs such as *Nature Scene* and *Math in the Middle* will be digitized and incorporated into Internet sites. Middle school students will benefit from courses such as Enviro-Tacklebox and Reading Across the Curriculum. **Contact:** Shirley Smith, (800) 476-5001  
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**URL:** [www.serc.org](http://www.serc.org)  
**Service Area:** Nationwide  
**Mailing Address:**  
Satellite Educational Resources Consortium  
P.O. Box 50,008  
Columbia, SC 29250



### **United STAR Distance Learning Consortium**

The USDLC Star Schools Project provides professional and staff development programming. It is designed to enhance existing curriculum by maximizing the full potential of the technological resources already available to today's students, teachers, and administrators. The project - through a convergence of distance learning technologies - utilizes an engaged learning approach to specifically improve:

- \* instruction in math, science, and reading
- \* technology integration into the classroom
- \* literacy development for adults and for deaf children

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### **MathStar**



MathStar will focus on the design and implementation of a distributed

learning professional development model supporting schoolwide mathematics reform and improvement for the middle school grades. Participating teachers will experience an intense learning curve as they learn to connect content to technology and provide students with rich, challenging, standards-based instruction.

MathStar project proposes to address three complex factors: a) systemic schoolwide standards-based reform of middle school mathematics to prepare students for algebra and geometry; b) reform of inservice and preservice programs and coordination among them; c) access to advanced technologies and telecommunications, which in turn increases access to high quality professional development, improved student learning, and parent involvement. By addressing these factors,

MathStar proposes to improve schoolwide middle school mathematics programs, increase teachers' professional expertise and classroom practice, enhance student learning through challenging content, and foster parent involvement in successful mathematics programs. The applicant will accomplish these activities through the involvement of experienced and committed partner agencies. This infrastructure will provide access to proven programs and practices. The project's in-depth evaluation process and new evaluation model is expected to result in a highly replicable MathStar Replication Kit that will be disseminated throughout the partner regions and the United States.

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Downey, CA 90242-2890



### Project IMPACT, TEAMS Distance Learning

Project IMPACT delivers instruction to elementary and middle school students and teachers through a distributed learning system, which allows participants to access information via satellite, television, multimedia, and the Internet. The mission of Project IMPACT is to transform traditional classrooms into technology-rich centers of learning to help students achieve high academic standards. Project IMPACT builds on the effective model of TEAMS Distance Learning, which has provided nation-wide distance learning services to urban and rural schools since 1990. **Contact:** Kitty Salinas,

Program Manager or Don Lake, Sr. Project Director; (562) 940-1616

**E-mail:** salinas\_kitty@lacoed.edu; lake\_don@lacoed.edu

**URL:** <http://teams.lacoed.edu>

**Service Area:** 8 states (AZ, CA, GA, LA, MS, MO, NM, UT); 4 Public School Districts: Boston, Charlotte-Mecklenburg, Detroit, District of Columbia

**Mailing Address:**

TEAMS Distance Learning

Los Angeles County Office of Education

9300 Imperial Highway, Room 250

Downey, CA 90242-2890

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## Special Statewide Network Grant



### Iowa Distance Education Alliance

Iowa's Star Schools Project demonstrates and supports the use of a statewide telecommunications network for K-12 education. Iowa's state-owned Iowa Communications Network (ICN) provides full motion, two-way interactive video, data (Internet), and voice services. There are currently over 600 ICN classrooms. Project goals include: developing multimedia instructional materials; supporting telecommunications and technology staff development and integration; providing access to distance education information and resources; and providing educational opportunities via the ICN. **Contact:** Pamela Adams Pfitzenmaier, (515) 242-4180

**E-mail:** [pam@iptv.org](mailto:pam@iptv.org)

**URL:** [www.iptv.org/iowa\\_database/](http://www.iptv.org/iowa_database/)

**Service Area:** Iowa

**Mailing Address:**

Iowa Distance Education Alliance  
Iowa Public Television  
6450 Corporate Drive  
Johnston, Iowa 50131

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## High School Completion and Adult Literacy Projects



### University of Nebraska-Lincoln-CLASS Project

The CLASS (Communications, Learning, Assessment in a Student-centered System) Project is creating a high school diploma sequence for delivery on the Web. Offered through the fully accredited Independent Study High School, CLASS courses maximize student learning through the use of moving imagery, graphics, sound, and text, within a seamless navigation system, that encourages individualized learning, discovery, and exploration. CLASS provides new avenues of educational access through cost-effective alternatives to conventional classroom teaching situations. **Contact:** James Sherwood (402) 472-4342 or Charlotte Hazzard (402) 472-0884

**E-mail:** [classweb@unlinfo.unl.edu](mailto:classweb@unlinfo.unl.edu)

**URL:** <http://class.unl.edu>

**Service Area:** Nationwide

**Mailing Address:**

University of Nebraska-Lincoln/CLASS Project  
Department of Distance Education  
336 NCCE  
Lincoln, NE 68583-9800



### Pacific Star Schools Adult Education/Literacy Project

The STEP°Star Network produces interactive educational

programming delivered by satellite and cable television. Programs are geared to adults who have not completed high school, those who wish to improve their English language skills and those who wish to expand or improve their workplace skills. Current broadcast programs include: GED Preparation, ESL/Citizenship III, ESL at Work, Parenting Skills, Practical Math, Learning a Living, the Five Secrets to Finding a Job, Success on the Job, Career Transitions and Owning Your Own Business. On-line and CD-ROM components supplement the broadcast programs.

**Contact:** Steve Witter, Project Director, (509) 456-7685 or Anne Watts, Project Manager, (509) 323-2729

**E-mail:** [info@esd101.net](mailto:info@esd101.net)

**URL:** <http://stepstar.esd101.net>

**Service Area:** Nationwide

**Mailing Address:**

Educational Service District 101  
910 North Ash  
Spokane, WA 99201-1881



### PBS Literacy Link

LiteracyLink offers a technology-based approach to adult literacy instruction that integrates the latest on-line, video, and computer technologies. LiteracyLink seeks to increase the access of adults to GED and workplace essential skills learning opportunities, to improve the quality of instruction available to individuals, and to expand professional development options for adult literacy providers across the nation.

**Contact:** Noreen Lopez, (703) 739-8600

**E-mail:** [literacy@pbs.org](mailto:literacy@pbs.org)

**URL:** [www.pbs.org/literacy](http://www.pbs.org/literacy)

**Service Area:** Nationwide

**Mailing Address:**

PBS LiteracyLink  
Public Broadcasting Service  
1320 Braddock Place  
Alexandria, VA 22314

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## Dissemination Project



### Distance Learning Resource Network (DLRN)

The WestEd Distance Learning Resource Network (DLRN) services the growing number of schools, colleges, and universities that use distance learning to reach rural and metropolitan learners, particularly the underserved. These activities include disseminating information about Star Schools courses and resources. DLRN provides training for web-based instruction and educator networking opportunities through an online forum. Other products include the DLRN Hotline, distance learning articles, the



DLRN electronic Journal, the DLRN Online Course for Educators, the DLRN Distance Learning ToolKit, and the DLRN Technology Resource Guide.

**Contact:** Peggy Kinder (415) 565-3056

**E-mail:** [dlrn@wested.org](mailto:dlrn@wested.org)

**URL:** [www.wested.org/tie/dlrn](http://www.wested.org/tie/dlrn)

**Helpline:** (800) 662-4160

**Service Area:** Nationwide

**Mailing Address:**

Distance Learning Resource Network

WestEd

730 Harrison Street

San Francisco, CA 94107-1242

*Revised 10/11/99*



**U.S. Department of Education  
Star Schools Program  
FY1999 Awards**

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**California**

**Award Number: R203F990024**

**Project: MathStar**

**Los Angeles County Office of Education**

**Contacts:** Mr. Donald S. Lake  
Project Director  
9300 Imperial Highway, Room 250  
Downey, CA 90242-2890

Ms. Marilyn T. Gogolin  
Deputy Superintendent  
9300 Imperial Highway, Room 250  
Downey, CA 90242-2890

**Phone:** 562-922-6635

562-922-6400

**Fax:** 562-922-6486

562-940-1662

**Email:** [lake\\_don@lacoed.edu](mailto:lake_don@lacoed.edu)

[gogolin\\_marilyn@lacoed.edu](mailto:gogolin_marilyn@lacoed.edu)

**Project Focus:** MathStar will focus on the design and implementation of a distributed learning professional development model supporting schoolwide mathematics reform and improvement for the middle school grades.

Participating teachers will experience an intense learning curve as they learn to connect content to technology and provide students with rich, challenging, standards-based instruction.

*MathStar* project proposes to address three complex factors: a) systemic schoolwide standards-based reform of middle school mathematics to prepare students for algebra and geometry; b) reform of inservice and preservice programs and coordination among them; c) access to advanced technologies and telecommunications, which in turn increases access to high quality professional development, improved student learning, and parent involvement. By addressing these factors, MathStar proposes to improve schoolwide middle school mathematics programs, increase teachers' professional expertise and classroom practice, enhance student learning through challenging content, and foster parent involvement in successful mathematics programs. The applicant will accomplish these activities through the involvement of experienced and committed partner agencies. This infrastructure will provide access to proven programs and practices. The project's in-depth evaluation process and new evaluation model is expected to result in a highly replicable MathStar Replication Kit that will be disseminated throughout the partner regions and the United States.

**Los Angeles County Office of Education—MathStar**

**5-year Budget Summary**

| Applicant Name                         | 1 <sup>st</sup> Year Funds | 2 <sup>nd</sup> Year Funds | 3 <sup>rd</sup> Year Funds | 4 <sup>th</sup> Year Funds | 5 <sup>th</sup> Year Funds |      |
|----------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------|
| Los Angeles County Office of Education | \$1,998,540                | \$1,987,286                | \$1,998,754                | \$1,997,800                | 1,934,931                  | \$9, |

## Connecticut

**Award Number R203F990036**

**Project: Reading is Fundamental Telecommunications Partnership**

**Area Cooperative Educational Services**

**Contacts:** Ms. Nancy Blanton  
Project Director  
10905 Fort Washington Road, Suite 300  
Fort Washington, MD 20744-5843

Mr. Peter C. Young  
Executive Director  
205 Skiff Street  
Hamden, CT 06517-1095

**Phone:** 301-292-9800 ext. 100

203-407-4400

**Fax:** 301-292-0829

203-407-4590

**Email:** [phoebuscom@aol.com](mailto:phoebuscom@aol.com)

[young@aces.k12.ct.us](mailto:young@aces.k12.ct.us)

**Project Focus:** Reading is Fundamental Telecommunications partnership will promote and support children and their families to become effective readers. This project will use satellite-delivered training programs along with innovative Internet-based activities to train parents and volunteers how to develop effective, motivated readers. The project will try to demonstrate how telecommunications technologies can help to create a nation of readers through this innovative telecommunications reading initiative.

This project represents an innovative and ambitious nationwide telecommunications reading initiative, using satellites, Palm Pilots, CD-ROMs, videos and on-line, web-based activities to expand access, exponentially, to training on how to prepare children to read, how to read to children, and how to help children become effective readers. The project will use satellite-delivered training programs, along with innovative Internet-based activities, to train parents and volunteers how to develop effective, motivated readers. The target audiences for this project are children, age's birth to 11 years old.

### Aces Cooperative Educational Services—Reading is Fundamental Telecommunications Partnership

#### 5-year Budget Summary

| Applicant Name                        | 1 <sup>st</sup> Year Funds | 2 <sup>nd</sup> Year Funds | 3 <sup>rd</sup> Year Funds | 4 <sup>th</sup> Year Funds | 5 <sup>th</sup> Year Funds |      |
|---------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------|
| Area Cooperative Educational Services | \$2,000,000                | \$2,000,000                | \$2,000,000                | \$2,000,000                | \$2,000,000                | \$10 |

## Hawaii

**Award Number R203F990026**

**Project: NEARStar (Network for English Acquisition and Reading)**

**Pacific Resources for Education and Learning (PREL)**

**Contact:** Dr. John W. Kofel  
Project Director  
Alii Place, 25th Floor  
1099 Alakea Street  
Honolulu, HI 96813-4513

**Phone:** 808-441-1300

**Fax:** 808-441-1385

**E-Mail:** [kofelj@prel.org](mailto:kofelj@prel.org)

**Project Focus:** NEARStar will focus on creating a distributed learning environment that will improve reading skills for limited or non-English speaking students and also provide professional development for teachers. This project will foster telecommunications infrastructure and end-user equipment to ensure the effective utilization of the project over the Internet and World Wide Web.

Project proposes to develop interactive web based software to address the needs of English as Second Language (ESL) students and their teachers. NEARStar's web based learning program will support students in developing English language and reading skills. Teachers will be able to instantly access diagnostic information about individual students or for the whole class. These diagnostic results will lead teachers directly to NEARStar's professional development component, which will be available in a variety of configurations and media. Through the program, teachers will have access to leading reading and English as Second Language experts; additional materials and resources in specific skills such as vocabulary building; and video streaming examples of research based effective instructional practices in real classrooms as part of university-level on-line course work and on-line collaborative inquiry groups.

### Pacific Resources for Education and Learning—NEARStar

#### 5-year Budget Summary

| Applicant Name                               | 1 <sup>st</sup> Year Funds | 2 <sup>nd</sup> Year Funds | 3 <sup>rd</sup> Year Funds | 4 <sup>th</sup> Year Funds | 5 <sup>th</sup> Year Funds |      |
|----------------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------|
| Pacific Resources for Education and Learning | \$1,999,990                | \$1,985,147                | \$1,991,650                | \$1,998,214                | \$1,998,286                | \$9, |

### New Mexico

**Award Number** R203F990015  
**Project:** The TECH Share Project  
**Gallup-McKinley County Schools**

**Contact:** Mr. Robert Gomez  
Project Director  
P.O. Box 1318  
Gallup, NM 87305-1318

**Phone:** 505-722-7711

**Fax:** 505-722-8913

**E-Mail:** [stalcup@gmcs.k12.nm.us](mailto:stalcup@gmcs.k12.nm.us)

**Project Focus:** TECH Share will improve student learning through the use of teacher-created, professionally honed learning modules. These modules will be technology driven and standards-based, with embedded strategies for teaching English to Speakers of Other Languages, and multicultural sensitivity. The TECH Share project will produce standards-based, electronic-based curriculum modules to be utilized by teachers in the classrooms.

The TECH Share Project is designed to use the multimedia capability of the Internet to provide interactive text, audio, and video on demand to support standards-based learning activities. The focus of the project will be to improve student learning through the use of teacher-created and professionally enhanced learning modules. These modules will be technology driven and will incorporate embedded strategies for Teaching English to Speakers of Other Languages (TESOL), as well as, multicultural sensitivity. A unique feature of the proposed project is that it will have as partners three Technology Innovation Challenge Grant projects so that materials and products that are being developed can be disseminated to a wider audience. When implemented, the overall scope of the project will service some 80,000 students, most of whom are either Limited English Proficient (LEP), low income, or both, and most of whom perform well below the national averages in academic achievement.

### Gallup-McKinley County Schools—TECH Share Project

#### 5-year Budget Summary

| Applicant Name                 | 1st Year Funds | 2nd Year Funds | 3rd Year Funds | 4th Year Funds | 5th Year Funds |      |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|------|
| Gallup-McKinley County Schools | \$1,990,589    | \$1,992,656    | \$1,930,360    | \$1,958,320    | \$1,998,006    | \$9, |

### Washington

**Award Number: R203F990010**

**Project: Corrections Learning Network  
Educational Service District 101**

**Contacts:** Dr. LeRoy Bauer  
Project Director  
1025 West Indiana Avenue  
Spokane, WA 99205-4400

Mr. Terry A. Munther  
Superintendent  
1025 West Indiana Avenue  
Spokane, WA 99205-4400

**Phone:** 509-323-2745

509-456-6320

**Fax:** 509-323-2758

509-456-2999

**Email:** [lbauer@esd101.net](mailto:lbauer@esd101.net)

[tmunther@esd101.net](mailto:tmunther@esd101.net)

**Project Focus:** The Corrections Learning Network will place special focus on the specific needs for adults in correctional facilities, such as victim empathy, wellness education, and anger management. It will also develop multiple technology channels which do not currently exist. The Corrections Learning Network will also develop a series of programs that will focus on topic such as computer operating systems, networks basic software applications, peripheral hardware, telecommunications and applications in the workplace.

This consortium proposes to provide technology based, interactive instructional programming to adult correctional facilities. The Corrections Learning Network will be piloted in Florida and Washington state and then disseminated nationally. The project will provide: 1) education for incarcerated adults, 2)

professional development for educators, and 3) system enhancements benefiting all audiences. A third-party evaluation providing qualitative and quantitative analyses to assess the impact on teaching and learning will measure project effectiveness.

### Educational Service District 101—Corrections Learning Network

#### 5-year Budget Summary

| Applicant Name                   | 1st Year Funds | 2nd Year Funds | 3rd Year Funds | 4th Year Funds | 5th Year Funds |     |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|-----|
| Educational Service District 101 | \$1,762,545    | \$1,756,521    | \$1,802,797    | \$1,867,537    | \$1,998,313    | \$9 |



*Last update June 17, 1999 (tca).*

# Star Schools -- Evaluation

## Evaluation

The following represents the highlights of the first formal evaluation of the Star Schools Program:

- More than 30 full courses were offered through the program that otherwise would not have been available to participating students across the country. Foreign language courses comprise the largest number of full-course offerings including Spanish, Russian, Japanese, and Latin, followed by mathematics, science, and advanced placement English.
- Full courses and instructional modules delivered through the program support and extend state and local educational reform efforts. The full courses enable students to meet high school graduation and college entrance requirements; the instructional modules, electronic field trips, and special targeted programming are aligned with current standards-based systemic reform efforts.
- Teachers reported changes in their behavior as a result of participating in the program which ranged from using different and varied curriculum materials, increased use of cooperative learning, and an increase in the use of multiple technologies.
- Curriculum experts rated Star Schools mathematics and science curricula highly with regard to their content and the instructional processes used. Teachers were provided with models of exemplary instructional practices.

## Challenges

- Staff development - Despite providing teachers with models of exemplary instructional practices, staff development efforts tended to be single teleconference presentations. Greater attention needs to be paid to developing more effective and long-standing models of staff development for teachers, administrators, and others including parents.
- Equity and longevity of services - One of the critical needs remains to provide more students with continuous and equitable access to engaging and challenging learning models which distance learning technologies can offer.
- Increased interaction among students - In spite of increased interest in the use of telecommunications, interaction among distance education students is minimal, particularly as class sizes across schools increase.

An evaluation of the Star Schools Program was conducted from October 1992 through December 1994 under a two-year contract with the Southwest Regional Educational Laboratory (SWRL). Below is the Executive Summary.

## Executive Summary

Congress enacted the Star Schools Program Assistance Act in FY 1988. When Congress reauthorized the program in 1991, it also required that the program be evaluated. This report is responsive to that mandate.

The intent of the legislation was to capitalize on new interactive communication technologies. By so doing, educators would be able to improve instruction in mathematics, science, foreign languages, adult literacy, and other subjects, especially to traditionally underserved students.

The Office of Educational Research and Improvement (OERI) of the U.S. Department of Education

administers the program. At the time of data collection for this report, three successive cycles of two-year Star Schools projects had been funded from annual appropriations that have ranged from \$13 million to \$22 million. During the first three cycles of funding, 10 Star Schools projects were funded.

This report describes the activities of the Star Schools projects funded between 1990 and 1994, with particular emphasis on the projects funded in the third cycle. Information was obtained through project records and interviews with project staff, as well as by site visits to the funded projects and 34 schools that participated in Star Schools activities. In addition, a group of curriculum experts reviewed curricula offered through the Star Schools Program.

## **Pluses and Minuses of the Star Schools Program**

### **Pluses**

1. Over 30 separate full courses are offered that otherwise would be unavailable to participating students. These courses include Spanish, Russian, Japanese, Latin, mathematics, science, and advanced placement English. Foreign languages comprise the largest number of full-course offerings.
2. Students in 10 major urban areas, as well as in other communities, have access to curriculum and instruction that supplement their classroom experiences. These supplemental courses, mainly in mathematics and science, involve students in hands-on activities and provide models of best practice to their teachers.
3. Both supplemental and full courses offered through the Star Schools Program support and extend state and local educational reform efforts. The full courses enable students to meet higher high school graduation and college entrance requirements; the supplemental courses and modules are aligned with current standards-based systemic reform efforts.
4. Star Schools activities were generally more successful in schools and districts that were committed to the success of distance learning. Even full courses that do not require a certified teacher benefited from a facilitator who invested in the distance learning program. The statewide program, although in the early stages of implementation when the evaluation took place, focused primarily on building local capacity for distance learning.
5. In schools in which they received support for involvement in Star Schools, teachers reported changes in their behavior ranging from the use of different curriculum materials, increased use of cooperative learning, and an increase in the use of multiple technologies.
6. Curriculum experts rated Star Schools mathematics and science curricula highly with regard to their content and the instructional processes used.
7. Participating teachers and facilitators cite exposure to students in diverse communities as a value of the distance learning program.

### **Minuses**

1. The two-year funding limitation continued to present a severe limitation on project activities. Particularly for new projects, the first year was spent building the necessary support for the technological infrastructure, including providing equipment, training teachers, and gathering materials. The time constraint was particularly problematic for complex projects using multiple technologies, those developing new applications of existing technologies, and those seeking to reach new audiences.
2. Aside from the staff development benefits accrued from providing teachers with models of exemplary instructional practices, staff development remains a problem for Star Schools projects.



Most staff development consists of "one-shot" teleconference workshops, which appear underused. Projects have little information about who participated and benefited. Alternative, more focused, and more effective models of staff development are seldom used in the Star Schools Program.

3. Successful implementation and positive impact of Star Schools activities are largely influenced by conditions at the district and school levels. Star Schools projects do not attend sufficiently to school-site concerns and, therefore, are not as successful as possible.
4. Curriculum experts in mathematics, and science rated Star Schools curricula as low in the attention to students' learning how to learn and communication. There was great variability in the extent to which curricula could be used with diverse learners.
5. Although Star Schools distance learning providers have developed approaches to increasing interactivity using satellite-based distance learning, other technologies are less widely used. Such technologies, although expensive, show great promise for fostering meaningful interaction across sites without simultaneous participation.
6. Star Schools activities seldom involve interactions among students across sites. Despite this, participating teachers and facilitators cite exposure to other students as a value of the distance learning program.
7. Projects provided little data on program effectiveness, particularly regarding student outcomes. Limited evidence indicates that Star Schools distance learning in full courses is as effective as other means of instruction. Efforts to evaluate programs in terms of their effects on teaching practice exist and show positive outcomes, albeit with low response rates.
8. Star Schools activities tend to replicate existing classroom structures and processes rather than explore uses of distance learning to create classrooms that enhance students' opportunities to construct knowledge.

## Recommendations

The following recommendations are offered:

1. OERI should continue support for full-course distance learning activities, supplemental courses and modules, and building local capacity for distance education. The evaluation indicates that the impact of involvement in distance learning takes time, and federal support is required for continuous activity.
2. Simultaneously OERI should examine incentives or requirements for Star Schools grant recipients to offer both full and supplemental experiences equitably. Students in schools serving largely minority, economically disadvantaged populations should have access to advanced courses, particularly if they have received strong preparation through earlier participation in Star Schools supplemental courses. Similarly, students in isolated rural areas should have the opportunity to experience the enriched curriculum offered through the supplemental courses.
3. OERI should encourage - through funding decisions, regulations, and incentives - grantees to collaborate closely with others involved in standards-based systemic reform. As Star Schools has increased attention to reform, projects have taken on a greater role as curriculum developers. As such, grantees should work closely with other individuals and organizations concerned with curricular and instructional implications of standards-based systemic reform. Star Schools projects, state education agency personnel, recipients of related grants, regional educational laboratories, and national professional organizations could all benefit from such collaboration.
4. Either through the Star Schools Program or other technology-oriented programs, OERI should

encourage increased adoption of multiple technologies. Technologies that lend themselves to interaction more easily than satellite-based systems are more likely to fit with current reform efforts.

5. Greater attention should be paid to the context in which Star Schools programs are received. For projects, this may mean focusing on fewer sites and providing support for stronger implementations than at present and reallocating money to support local sites more fully. Projects can encourage district and school administrators to select teachers and facilitators who are likely to be successful. For OERI, this may mean equal attention in making grants to proposed recipients as to proposed activities.
6. In line with the previous recommendation, at least one Star Schools research study should focus on describing the local conditions that enhance successful implementation and impact. Further, Star Schools dissemination grants should include disseminating information to projects and potential sites about the support required for success in distance learning.
7. Star Schools Program grant recipients and their evaluators should attend more carefully to developing an information base. The information should include data concerning the characteristics of participating students and teachers as well as information about impact. OERI should provide leadership to ensure that the same types of data are collected across projects.

## Project Evaluation Highlights

Each of the projects previously funded under the Star Schools Program included an evaluation component. In most instances, the evaluation strategy involved formative and summative methods. Two of the former projects also included case studies which documented changes in both student behaviors, teacher attitudes, and school climate as a result of participation in the Star Schools activities. Some examples of these findings are presented below:

- Teachers reported that undeserved and disadvantaged students, including minority and learning-disabled students, were better served by the distance learning curriculum/programs than by the regular or traditional curriculum/programs.
- Many teachers reported changing their approach to teaching as a result of the Program, including using and valuing more open-ended, collaborative teaching; interdisciplinary team-teaching; and new evaluation methods.
- Ninety-six percent (96%) of the science teachers in one project indicated that they had little competence in science prior to their participating in the program, and therefore, relied almost exclusively on the classroom textbook when teaching a science lesson. Because of the support received during the telecast staff development classes and the science classes for students, teachers indicated that they became more confident in presenting their own lessons and less dependent on the textbook.
- Students often take advanced placement classes for college practice rather than for college credit. Having an opportunity to take difficult and challenging courses in a familiar environment gave students in small, rural schools additional confidence in their own academic abilities and reassurance that they could survive in more competitive post-secondary educational environments.
- Several students at a Louisiana high school received college credit based on their scores on an AP economics exam. The facilitator at the school stated that the satellite course prepared their students for the entrance exam.

The following are examples at the local level which demonstrate the impact that the Star Schools program has made:

- Leckie Elementary School in Washington, DC, has integrated technology into its total academic program. The school receives cable, fiber optics and closed circuit transmissions as well as an ethernet system. Through the coordination of the TEAMS Washington Star Schools Office, Leckie receives instructional programming and staff development activities from four Star Schools grantees. One of the special programs which was produced by the School District of Philadelphia was used to teach elementary school students about the brain, its physiology, mental operations and other complex aspects. By employing the aid of several medical science experts, a classroom teacher, and modern technology, the project staff was able to present this subject in an interactive Teaming mode that was not only understandable to the students but appreciated by the teachers who participated the presentation. Students and teachers in major urban schools across the country were able to pose questions during the presentation. Following the on-air presentation, students at Leckie and other schools across the nation continued to talk about what they had learned through computerbased networks.
- Teachers at schools like Steele Elementary School in Harrisburg, PA, and Meadowvale Elementary School in Sunbury, PA, are using an exciting multi-media telecommunications technology and easy navigational software to connect to other teachers around the country and to resource databases around the world via the Internet. Using the Explorer software, created under a Star Schools grant, teachers point and click on curriculum content, classroom objectives, and grade level to local multi-media materials and lesson plans that match specific topic areas and learning outcomes. Materials on the Explorer resource database have been matched to the national math and science curricula standards. Teachers can add material to the database on a continuing basis and develop original curriculum to be included in the database.
- Prior to 1990, the local junior high school in a small working class town in Massachusetts had a departmentalized, homogeneously grouped program. Through participation in and with support from the Star Schools program, students at the junior high school became involved in a major change effort that ultimately transformed teaching and learning for the entire community. Following intensive preparation by the teachers, students became actively involved in various telecommunications activities. During the Christmas break, students came into school nine out of twelve days to work on their science projects, videotaping their reports for later class presentation. One parent told his child's teacher, "I never before heard what the kids did at school, but now my daughter's talking about science on the phone." Teachers across the curriculum are working together -- for example, English teachers now work with science students to help them with their research reports. In 1993, team teaching and "hands-on" strategies were introduced throughout the junior high school program. The school intends to move block scheduling. Students will spend half the school year in intensive science/math programs and half the year focusing on English/social studies. Now, all of the town's schools have access to the satellite downlink and the programs are hooked into the local cable channel so that the entire community has access as well.
- In March 1994, Col. Fred Gregory, a veteran of three space shuttle missions, fielded calls as about 3,500 fourth, fifth, and sixth-graders in schools across the Northwest participated in the Education Service District 101's Young Astronaut program, a partnership effort with the Young Astronauts Council. In November 1994, NASA Astronaut Dick Richards also participated in a live broadcast with students as part of the course which provides an overview of science topics framed by the experiences of people who travel in space.
- Students in Georgia who participated in a Star Schools-funded Japanese class taught by a native speaker in Nebraska, won a statewide language competition and then went on to win first, second, and third place in a national foreign language competition.
- Through the Great Lakes Collaborative, one teacher was able to bring his students into the exciting world of telecommunications by accessing the Ask A Scientist project, sponsored by the Argonne National Laboratory. The class was able to pose questions to a host of scientists electronically and then to receive the responses directly from the scientists. In an effort to involve the community in this project, the teacher made the communications network available to parents and other community members as they attended the local Science Fair.

- In February 1994, 25 schools in three States participated in an effort which linked math, science, social studies and language arts for grades K-9. Participating classrooms were provided with a weather kit, activity master worksheets, and extension ideas prior to the exercise. During two of the hardest, coldest winter weeks this century, students reported the temperatures at their sites several times daily and sent their results electronically to an online server. Information from all the sites was then collated and sent back to them electronically as raw data for charts, weather mapping, essays, penpal exchanges and special reports by the students.
- Workplace Basics, a class offered via satellite, is designed to help participants develop and assess their abilities to deliver the skills employers seek. When a student in north central Washington was hired into a position over several adults with previous experience, he attributed his success to interviewing, resume writing, and communication skills sharpened during Workplace Basics activities which bring the global economy to a local level, and in most instances, offer options never imagined by students in rural and remote locations.

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[Star Schools Abstracts - - Past and Present]



[Sites with Internet Presence]

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*Last updated September 26, 1995 (jt).*

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# Star Schools -- What is the Star Schools Program?

The purpose of the Star Schools Program is to encourage improved instruction in mathematics, science, and foreign languages as well as other subjects, such as literacy skills and vocational education, and to serve underserved populations, including the disadvantaged, illiterate, limited-English proficient, and individuals with disabilities through the use of telecommunications. The Star Schools Program was first authorized in 1988 and was reauthorized most recently under Title III of the Improving America's Schools Act (PL103-382).

The reauthorization allows the Office of Educational Research and Improvement to make grants for a duration of five (5) years and adds authority to make awards for a special statewide project, special local project, and for leadership, dissemination and evaluation activities. The Department has awarded more than \$125 million to telecommunications partnerships since the Program was authorized in 1988. The Program has provided services to more than 6,000 schools in every State, the District of Columbia, and several territories. Approximately 1,600,000 learners have participated in the student, staff development, parental, and community-based activities produced under the Star Schools Program. However, because programming is also distributed via cable and other services for which no formal registration is made, the actual number of individuals who benefitted from this program is difficult to enumerate.

The following statements best describe the program as it has evolved since 1988:

- The Star Schools program is one of the largest networks of public and private sector partners (schools, school districts, state departments of education, telecommunications entities, universities, regional service centers, etc.) helping to build the capacity of the education community to make effective use of the information superhighway.
- The Star Schools program is a distribution/dissemination system connecting learners of all ages with peers, experts, resources, and experiences to enhance their lives.
- The Star Schools program is a content-development program, producing a world-wide syllabus of multi-media applications including semester courses, instructional modules, special topic video teleconferences, electronic field trips, and access to online resources.
- The Star Schools program is a professional development program, providing teachers, administrators, policy makers, and others concerned about education with a mechanism to become better informed.
- The Star Schools program is a national study of the change process, documenting the role of technology and telecommunications in school reform at both the local and state level and examining alternative assessment strategies through technology.
- The Star Schools Program is a technical assistance system building the capacity of state and local personnel to make good decisions about investing in and making effective use of the information superhighway.

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