Summer 1999

RFA Briefs

How Can Technology Strengthen Teaching and Learning?

Introducing Research for Action

Research for Action (RFA) is a Philadelphiabased non-profit organization engaged in educational research and reform. Founded in 1992. RFA works with educators, students, parents and community members to improve educational opportunities and outcomes for all students. Research for Action seeks to inform the national dialogue about creating rigorous and caring schools for all students. We present our work through reports, articles, workshops, panel presentations, speaking engagements and videos.

Few schools remain untouched by the presence - and promise - of technology. The key question is no longer "Should computers be in schools?" but "How can computers - and the technologies they make possible, like telecommunications - invigorate the culture and curriculum of schools, strengthen teaching and learning, and contribute to whole school change?"

Over the past several years *Research for Action* (RFA) has conducted evaluations for the Science Learning Network (SLN) and the Bread Loaf Rural Teachers Network (BLRTN), each of which developed and piloted a particular model



for using new technologies to support teaching, learning, and institutional change.

BLRTN is a practitioners' network for English teachers in rural public schools who are engaged in graduate study at the Bread Loaf School of English at Middlebury College. An online network as a catalyst for writing among teachers and students is central to the program.

Key features of BLRTN include a summer experience at one of Bread Loaf's campuses, periodic faceto-face meetings of BLRTN participants, and access to BreadNet, Bread Loaf's online network.

SLN was a three-year partnership that combined the resources of six science museums with the power of the Internet to support inquiry-based science in K-8 urban public schools. One of SLN's central assumptions was that in order for teachers to tap the full potential of telecomputing. teachers would need full access to networking technology, and they would also need to adopt a project-based. constructivist approach to science teaching and learning. Key features of SLN included the development of online science resources for students and teachers, partnerships between science museums and public schools, and the involvement of as many teachers as possible at each school site so that whole school change might be possible.



Teaching and learning

After several years of experience, teachers in SLN and BLRTN were successfully using telecommunications to support ongoing, project-based learning. Initially, teachers used e-mail and the Internet primarily as sources for discrete information. However, with experience and over time, they began using telecommunications to make student questions more central features of classroom interactions. In SLN, the resources of the Internet encouraged elementary school teachers, who often had limited science content backgrounds, to view students' questions as new opportunities for exploration. BLRTN's electronic conferencing network provided rural middle school and high school students with authentic audiences and opportunities to engage in dialogue about shared texts with peers in distant communities.

■ Technology, time and access

Making telecomputing an integral part of curriculum was a developmental process requiring intensive, direct, and personalized support for teachers. As one BRLTN teacher reflected: "Hands on experience (with technology) leads you to understand the logistics, structures, and formats. It takes a year's work to get to the point where you have a clear notion of a project and how to implement that. It takes two to three years to see the logistics and structures of your own classroom...and the constraints become clearer."

Teachers and students needed ongoing, consistent access to computer terminals, printers, and modems in order to utilize the online environment's potential for supporting an intellectually challenging, project-based curriculum. Because the typical school day provided limited time for teachers to experiment with integrating sophisticated technological tools into their curriculum and pedagogy, teachers often took on this task at home on their own time.

Partnerships

Both programs have created partnerships with schools for making school-wide change. SLN incorporated school-museum partnerships into its original model, and participating museum staff learned lessons about negotiating time, commitments, and work cultures in order to make school-museum partnerships work. Bread Loaf staff learned that they needed to build connections with administrators and others from local schools in order to ensure that the project would fulfill its potential; this created unprecedented school/university partnerships for many isolated rural schools.

SLN and BLTRN partnerships for supporting new technologies have changed the public school partners and have also redefined boundaries and relationships within the sponsoring institutions. At Bread Loaf, graduate education changed from a campus-bound, timelimited experience to an ongoing, continuous intellectual endeavor as telecommunications enabled year-round discussions between Bread Loaf faculty and participating BLRTN teachers. Through SLN, staff roles within participating museums were redefined as work with telecommunications brought new visibility and responsibilities to education staff.



LEARN MORE ABOUT BLRTN AND SLN THROUGH THESE RFA PUBLICATIONS:

Networking Across
Boundaries of Place,
Culture and Role: A Report
to Bread Loaf Rural
Teachers Network

by Eva Gold, Elaine Simon and Alisa Belzer (1997). Funded by the DeWitt-Wallace Reader's Digest Foundation.

The Science Learning Network: An Experiment in Technology, Museum-School Partnerships and Educational Reform

by Suzanne Blanc, Tabatha Abu El-Haj and Jolley B. Christman (1998). Prepared for The Franklin Institute and funded by the National Science Foundation and Unisys Corporation.

To order these and other RFA publications, please visit our web site at www.researchforaction.org and follow the "Publications" link to our order form. You may also call us at 215-823-2500 to request a publications list and order form.

Connections

Research for Action is conducting a three-year evaluation of the Keystone Science Network (KSN), a new project of The Franklin Institute. KSN's goal is to create a professional learning community in eastern Pennsylvania which promotes the implementation of standardsbased K-8 science curricula and professional growth for teachers. Building on the lessons of the Science Learning Network (www.sln.org). KSN will offer online resources to support the use of inquiry science kits in classrooms. The project kicks off with a summer institute for 50 teachers from ten participating school districts at Messiah College.

Bread Loaf Rural Teacher Network (BLRTN) teacher Scott Christian has written Exchanging Lives: Middle School Writers On-Line. Urbana, IL, National Council of Teachers of English, 1997.

Other teachers participating in BLRTN have contributed chapters to several recent books:

The Nearness of You: Students and Teachers Writing On-line

Christopher Edgar and Susan Nelson Wood, eds. New York, Teachers and Writers Collaborative, 1996.

Electronic Networks: Crossing Boundaries/ Creating Communities

Tharon Howard and Chris Benson with Rocky Gooch and Dixie Goswami, eds. Heinemann, Boynton/Cook, 1999.

Articles by BLRTN teachers about the work of the network also appear in *Bread Loaf Rural Teacher Network Magazine*, a publication of the Bread Loaf School of English, Middlebury College, Middlebury, VT 05753-6115.

Project Updates

Girls participating in STAR (Sisters Together in Action Research) at Gillespie Middle School sparked student interest in reading and talking about books by organizing a series of Oprahstyle book club discussions which were held this spring. STAR girls also conducted research on adolescent identity this year through interviews of adults in their families and communities.

STAR, a school-based literacy and leadership development program for adolescent girls in North Philadelphia, completed its second year in June. Directed by Diane C. Brown with assistance from Rhonda Mordecai-Phillips and Jody Cohen, STAR is one of 14 programs nation-wide supported by The Ms. Foundation to promote girls' healthy development. For more information about STAR, head for the RFA web page at www.researchforaction.org and click on the "What's New" link.

Staff Notes

Rhonda Mordecai-Phillips, RFA Research Assistant, and Shirley Brown, past RFA Board member. presented on "Raising Their Voices: Public Schools, Universities and Gender Studies" at the Greater Philadelphia Women's Studies Consortium.

Jolley B. Christman, RFA
Principal, Eva Gold, RFA Principal, and Elaine Simon, RFA
Research Associate, presented at
the annual meeting of the American Educational Research Association. As panel members in a
discussion of Children Achieving,
Jolley spoke on "How Does One
Size Fit All? Systemic Reform in

Philadelphia Elementary, Middle, and High Schools," and Elaine spoke on "School-to-Career in the Context of Systemic Reform." Eva was a member of a panel discussion on Home/School/Community Connections: Cultural, Racial and Class Contexts and spoke on "Journeying from Home and Community to School."

At the annual meeting of the American Anthropology Association, Suzanne Blanc, RFA Senior Research Associate, and Eva Gold. RFA Principal, were panel participants in a discussion titled "Learning in Multiple Spaces: Knowledge Construction and Assessment in the Postindustrial Society." Suzanne drew on her research with the Science Learning Network and its online community and addressed the feasibility of a unified social vision of teaching and learning in the 21st century. Eva drew on her research with the Bread Loaf Rural Teachers Network and focused on the challenges of building personalized contexts for learning online across geographic, cultural, and role boundaries.

RFA On The Web

Please visit us via the Internet at

www.researchforaction.org.

We would be happy to hear your comments and suggestions regarding the site; e-mail us at rfa@libertynet.org.

New Board Members New RFA Reports

We welcome Alice Reyes and Jeff Shultz to the Board of Directors of Research for Action. Alice is Principal at the Penn Valley Elementary School in the Lower Merion School District. Previously, she served as a principal and cluster leader in Philadelphia. She is an active supporter of reform efforts, including the Coalition of Essential Schools. Jeff is Professor of Education and Coordinator of General Education at Beaver College and a former president of the Council on Anthropology and Education. His research interests are in the areas of cross-cultural communication, children's culture, sociolinguistics and bilingualism.

A Report to the Alliance Organizing Project on its Work with Parents.

Written by Eva Gold and Diane C. Brown, the report documents the experience of parents as they form parent leadership teams at their local schools and build relationships with administrators and teachers.

"Up-Close and Personal": An Evaluation of the American Red Cross Partners for Youth Program.

Written by Suzanne Blanc, Diane C. Brown, and Hitomi Yoshida, the report examines the development of an innovative service learning program that partners the country's premier service organization with students in three Philadelphia middle schools.

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come to the first issue of **RFA Briefs**. In this semi-annual newsletter we will share what we have been learning about teaching, learning and school change. This issue highlights our work with two recent partners, the Science Learning Network and the Bread Loaf Rural Teacher Network; each group has used new technologies to support teaching and learning and to promote innovation in educational settings.

RFA Briefs is also available on our web site. You can read the on-line hyper-linked version by clicking on the "RFA Briefs" link at www.researchforaction.org. Check it out!

Research for Action

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